

3.5 SOCIAL AND ECONOMIC CONDITIONS

3.51 ECONOMICS

Laws, Regulations, and Policies

- National Environmental Policy Act of 1972 (42 U.S.C. 4321)
- Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.)
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Affected Environment

This section examines recent and past conditions and trends in the economy of the area, presenting information separately for Madison and Beaverhead counties. This economic assessment includes the following components:

Area Characterization The two counties are characterized by key features like population size, proximity to major cities, and underlying area industry dependencies. This is done in order to provide context for understanding the types of places these two counties are and the role that they play in the larger economy. The *READ Urban-to-Rural Hierarchy* is used to classify and characterize these counties.

Population Trends Area population levels and trends are examined, focusing on the last twenty-five years.

Age Structure Trends Changing area population age features are examined, looking at median age and population counts by single ages for different points in time. Shifts in age structure and birth and death rates are examined.

Personal Income Growth and Change

Total personal income levels and trends are examined, including by income composition (labor earnings, investment income, and transfer payments income).

Labor Force Trends Labor force levels over time and unemployment rates are examined.

Employment Trends Total employment over time is examined by major type (wage and salary workers vs. proprietors), by private and public employment, and by major sector (farm, non-farm, manufacturing, services, retail trade, local government, etc.)

Area Economic Restructuring and Change Area income growth and decline by major sector and sub-sector is examined and changes occurring in the “economic base” of the area are identified and evaluated, describing how the structure of the area economy is organized and changing.

Key Industry Profiles Based upon the analysis of area economic structure, key industries are identified and profiled, noting conditions and trends over time.

Area Economic Well-being The quality of economic life is not easily measured, but several indicators are used to gauge levels and direction of change in area economic well-being. These include per capita income, median income, and area poverty rates.

Area Characterization

The larger economy and processes of economic, technological, and social change play out differently in different types of regions and places within regions. Migration trends, population aging, and income and employment trends vary tremendously from one place to the next in the U.S. There are certain defining characteristics of every area that heavily

influence and shape the nature of local economic activity and help us to explain what we may find in examining a particular area's economy. These include:

- 1) the size of the local population and personal income bases, which define the size of the local market area and feasibility ranges for certain types of businesses and economic activity;
- 2) an area's relative isolation or proximity to larger cities; cities that can exert economic dominance over smaller nearby places while also providing economic capacities and potentials for smaller communities in the larger region;
- 3) longstanding area underlying economic dependencies, including dependencies on industries and sectors like manufacturing, government, agriculture, mining, and travel and tourism;
- 4) particular area racial and cultural features, such as the presence of a large Native American population, that can be further reflected in area income and employment characteristics; and
- 5) other area-defining features, such as land and water features and area amenities, that can greatly influence the nature of area economic activity and the quality of community life.

It's important to understand the position an area occupies in the continuum of places between those that are very "urban" or metropolitan in character and those that are very "rural" or non-metro in character. There are progressively more rural or more urban places as you move up and down a hierarchy of places from the most heavily populated metropolitan cores to the most isolated and sparsely-populated rural areas. And a local area's economic role and overall economic functionality and complexity are in many ways determined by where it sits within this hierarchy of places.

A classification scheme has been developed for placing local areas within a broadly-framed "urban-to-rural hierarchy" of places, based upon both area population levels and area proximities to larger cities (See **Appendix H: READ Urban-**

to-Rural Hierarchy). Within this classification system, Madison County is classified as a county that is "closely-linked" to a "small regional center" county. Madison County does not contain the principal regional population center of its area, which is Bozeman in nearby Gallatin County. Because Madison County is adjacent to the county containing this center and is influenced economically by this proximity, it is referred to as closely-linked. Both the proximity and size of an area's primary population center is of significance and Bozeman is a "small regional center," that is, it is contained within a county with a 1990 population between 30,000 and 60,000 people. On the *READ* map in the appendix showing "major population centers or region cores and their closely-linked counties in the West," Madison County is shown in light yellow signifying this classification.

Beaverhead County has the same classification as Madison County, although it is "closely-linked" to a different regional population center (Butte in Silver Bow County). For counties with relatively small populations, their relative proximity to a major city strongly influences area economic trends. Counties of this size in more isolated rural areas with no population centers of any size tend to follow different economic paths than those nearby major population centers, even when these centers are relatively small

The *READ* classification system – *READ* refers to the *Regional Economies Assessment Database* - has been applied to all counties throughout the 22 contiguous states west of the Mississippi River. These 22 states contain 1,500 counties and each of these counties has been classified. This allows economic conditions and trends to be isolated and examined for particular classes, groups and sub-groups of counties having common characteristics throughout the West. By doing so, patterns in population and economic change can be examined by type of place and this can be used in interpreting trends in particular areas, allowing local trends to be placed into a larger context.

This classification scheme can also be used in examining trends in particular types of areas nearby major concentrations of public lands, like those managed by the federal Bureau of Land Management (BLM). Appendix H contains a map showing BLM lands in the West and areas nearby these lands. There are nearly 239,000 square miles of BLM lands in the 22 western states and there are 160 counties containing and/or nearby these lands. One hundred and fifty of these counties have no place with 50,000 population or greater, including Madison and Beaverhead Counties. These counties have been classified and grouped using criteria contained in the *READ* classification system. This permits conditions and trends for particular types of areas nearby BLM lands to be isolated and evaluated, again, helping to provide context for evaluating conditions and trends in any particular area, such as Madison and Beaverhead Counties.

Other information regarding the two counties used in their characterization:

Beaverhead Co.:

- Size: 5,572 square miles
- Federal lands: 3,347 (60% of total) with 1,042 in BLM lands and 2,176 in F.S. lands
- 1990 population density: 1.51 persons per square mile (very sparsely populated)
- Largest city: Dillon with '90 population of 3,991
- Underlying industry dependencies: Federal/State govt. – 17.4% of area labor income in '92 three-year benchmark (considered “dependent”); Manufacturing – 1.9% of labor income (not “dependent”); Production agriculture – 18.1% of labor income (considered “dependent”); and Hotels/motels (travel industry dependency) - \$159 thousand in hotel/motel labor earnings per 1000 population (considered “dependent”)
- American Indian population – 1.4% of '90 total population (very low percentage)

- Commuting work force – 3.4% of '90 workforce (low percentage)
- County “nearby BLM lands” containing no city greater than 50,000 pop. (Code 3)
- County “nearby Forest Service lands,” also Code 3

Madison Co.:

- Size: 3,603 square miles
- Federal lands: 1,777 (49% of total) with 391 in BLM lands and 1,387 in F.S. lands
- 1990 population density: 1.66 persons per square mile (very sparsely populated)
- Largest city: Ennis with '90 population of 660
- Underlying industry dependencies: Federal/State govt. – 7.3% of area labor income in '92 three-year benchmark (considered “not dependent”); Manufacturing – 3.3% of labor income (not “dependent”); Production agriculture – 10.9% of labor income (considered “not dependent”); and Hotels/motels (travel industry dependency) - \$221 thousand in hotel/motel labor earnings per 1000 population (considered “dependent”)
- American Indian population – 0.7% of '90 total population (very low percentage)
- Commuting work force – 18.9% (moderately high level of commuters)
- County “nearby BLM lands” containing no city greater than 50,000 pop. (Code 3)
- County “nearby Forest Services lands,” also Code 3

Madison County is a large, sparsely populated county with no cities greater than populations of 1,000. The county is adjacent to Gallatin County, which contains the area’s regional center, Bozeman, which is a modest size city. A significant share of Madison County’s work force commutes out of the county to work. The county’s most significant underlying industry dependency is on the travel industry, but it also

has a sizeable agricultural sector. It has a very small manufacturing sector.

Beaverhead County is even larger in size than Madison County, but also is very sparsely populated. Its largest city is Dillon with nearly 4,000 population. The county is adjacent to Silver Bow County, which contains the regional population center of Butte. However, only a

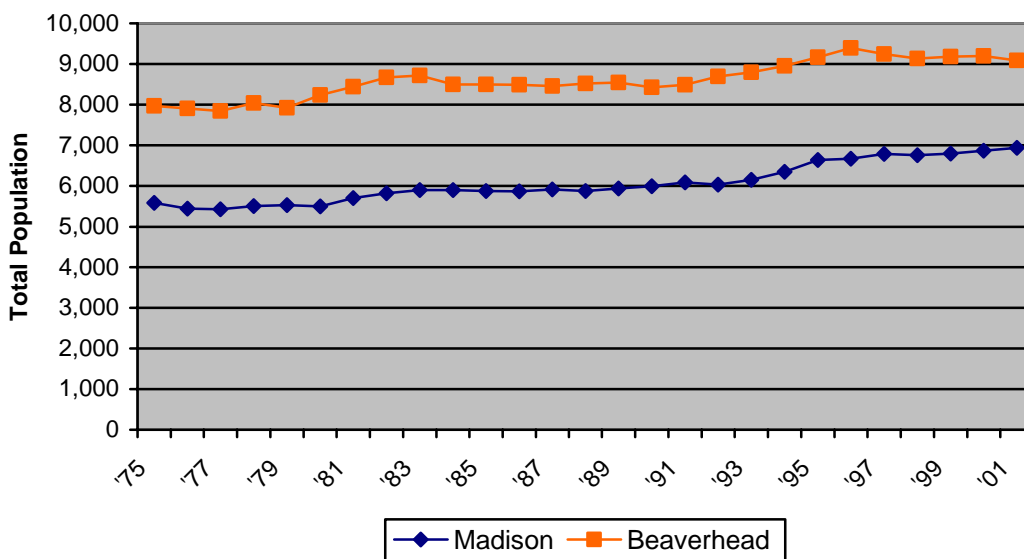
Population Trends

The populations of both Madison and Beaverhead Counties are small and this is

small proportion of Beaverhead County's work force commutes to work outside of the county. The county's underlying industry dependencies include Federal and State government, production agriculture, and the travel industry. It has a very small manufacturing sector. American Indian populations in both Beaverhead and Madison Counties are very small.

particularly true in relation to the geographic size of the counties. **Figure 4** shows population levels for the two counties over the last twenty-five years.

Figure 4: Population Change in Madison & Beaverhead Counties



The most recent estimate for Beaverhead County places its population at just over 9,000 (July, 2001) and the latest estimate for Madison County is just under 6,000. Beaverhead County's population saw increases in the early '80s and mid-90s, accounting for most of the increase in population from around 8,000 in the mid-70s. Madison County's population has grown in similar fashion, but is continuing to grow in more recent years while the population of Beaverhead County has slightly declined since reaching a peak of over 9,100 in 1996. Over the course of the last decade, population growth in Montana has been focused in the

western, more mountainous sections of the state, particularly in and around the population centers of Missoula, Kalispell, Helena, and Bozeman. Rapid population growth also is occurring throughout the western United States nearby large national parks, and Madison County is nearby Yellowstone Park.

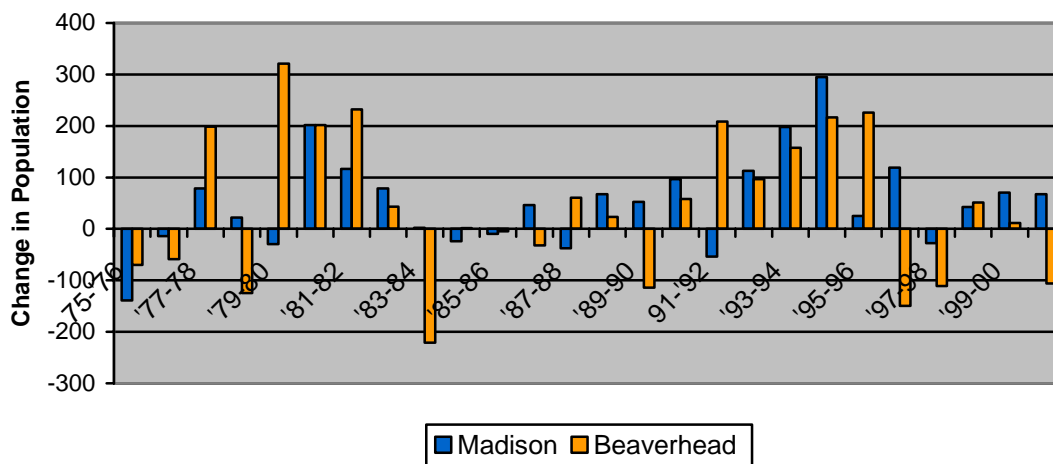
Of the 160 counties in the West nearby BLM lands, 150 are counties having no place greater than 50,000 population (using '90 Census counts). And of this 150, 13 are counties with large and small regional population centers (*READ Codes 31, 41 and 51*). Thirty-nine of the

counties are counties nearby these regional centers (*READ Codes 32, 42, 52*), and 28 of these counties have total populations under 20,000. Madison and Beaverhead Counties are two of these 28 counties nearby BLM lands with these population characteristics. The others are in Idaho, Oregon, Wyoming, Utah, and New Mexico. This group of 28 counties are referred to as “BLM peer counties” and used in interpreting some of the trends in Madison and Beaverhead Counties. Between 1980 and 1990, the combined population of these 28 counties grew by less than one percent. But, between 1990 and 2000, the population of these counties grew by over 12 percent. Beaverhead’s population grew by only 2 percent in the ‘80s and by 9 percent in the ‘90s, while Madison County’s population grew by 9 percent and 15 percent, respectively, for the two periods. So, for areas like these nearby BLM lands, population growth increased considerably during the last decade.

Figure 5 shows annual population change in Madison and Beaverhead Counties over time.

Trends and patterns of change in the counties closely parallel each other, although it can be seen that since the mid-90s population growth is trending up in Madison County and trending down in Beaverhead County. Madison County’s growth may be in part explained by rapid growth occurring in its nearby regional center of Bozeman, which is growing much more rapidly than Butte, the closest regional center of Beaverhead County. Madison County also has a greater dependence on travel and tourism, which have been growing in the West, and this also may account for its moderately higher rate of growth in population. Both Madison and Beaverhead Counties experienced considerable population growth in the early and mid-90s. This growth coincides with fairly dramatic shifts in migration patterns in the western United States during this period. Net migration, once heavily focused in California and in major metro areas in other states, shifted somewhat during the ‘90s with high rates of net migration occurring among many non-metro and rural counties in certain regions of the West, including the Rocky Mountains.

Figure 5: Annual Population Change in Madison and Beaverhead Counties



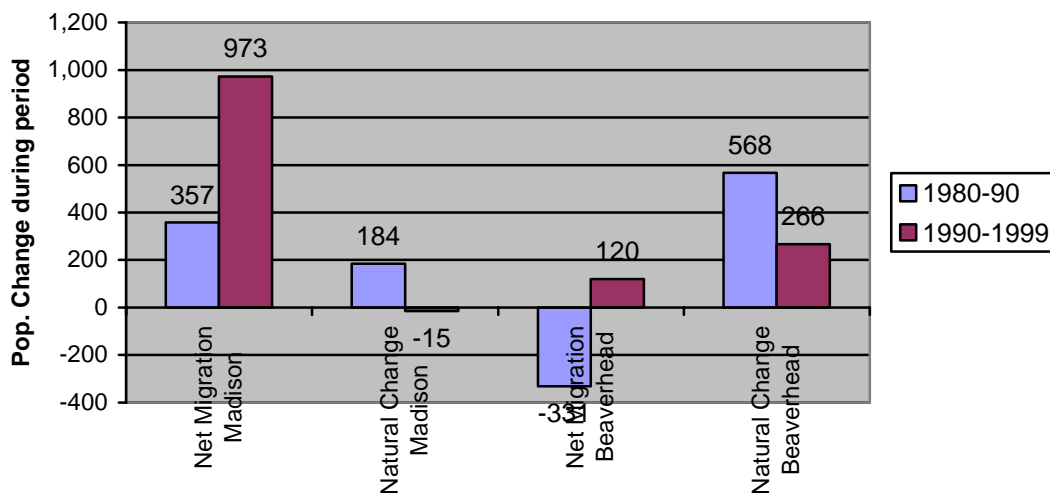
This shift in migration patterns led to significantly higher rates of net in-migration in many areas of western Montana where these two counties are located. **Figure 6** shows population change for Madison and Beaverhead Counties by component; comparing growth resulting from

net migration – or the net of people moving to and from the area during a given period of time – versus population change resulting from what is referred to as “natural change” – the net of area births and deaths during a period of time. During the 1980s, Madison County’s population

grew by 540 people, with net migration accounting for 66 percent of the growth. Between 1990 and 1999, its population grew by nearly 940 people, with all growth accounted for by net migration. In fact, natural change in Madison County was negative in this latter period, with the number of deaths slightly exceeding births. In Beaverhead County, the total population grew by nearly 240 people in

the '80s, in spite of net out-migration of 331 people. This resulted because area births greatly exceeded deaths. But between 1990 and 1999, growth through natural change declined while net migration went from negative to positive. For the next ten to fifteen years, area population trends will be largely determined by migration patterns, as populations continue to age, birth rates fall, and death rates rise.

**Figure 6: Components of Population Change
1980-90 vs. 1990-99**

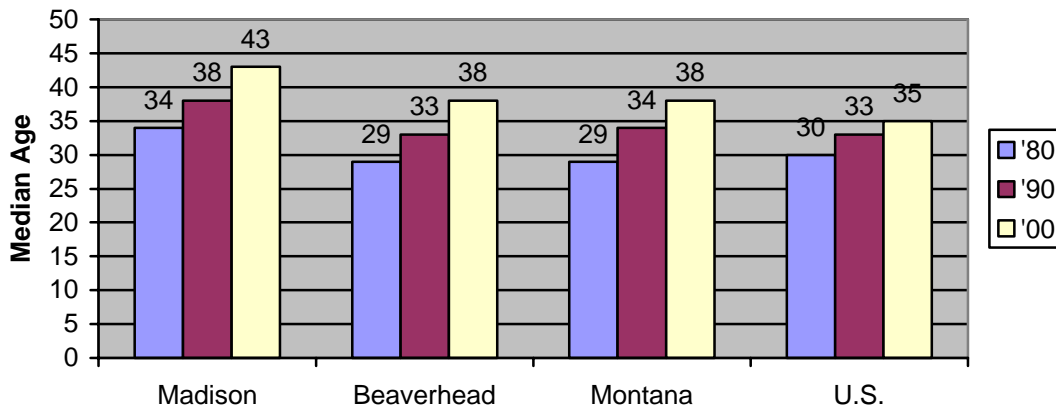


Demographic Trends

Significant changes are occurring in the age structure of the U.S. population, largely because of imbalances in the size of the population across differing age groups. The “baby boom” population, consisting of persons born between

1946 and 1964, is disproportionately large and is now composed of persons in their 40s and 50s. As this large population segment ages, so does the population as a whole, and this trend is evident in the two counties as well. **Figure 7** displays this trend.

Figure 7: Population Median Age



The median age of the U.S. population rose from 30 in 1980 to 33 in 1990 and to 35 more recently in 2000. Montana's population followed a similar pattern, but is aging more rapidly, rising to a median age of 38 in 2000. The median age of Beaverhead County's population has closely followed the pattern statewide, while aging has been more pronounced in Madison County. At a median age of 43 in 2000, the population of Madison County can be considered relatively "old" by national standards. There is evidence that non-metro counties in the West with increasing migration are seeing disproportionate increases in their populations of persons in their 40s and 50s. This has been the case in Madison County where the largest increases in the population between 1990 and 2000 occurred among persons between 42 and 64. These shifts in age structure have further implications for area economies, including the mix of local economic activity and employment and the composition of personal income.

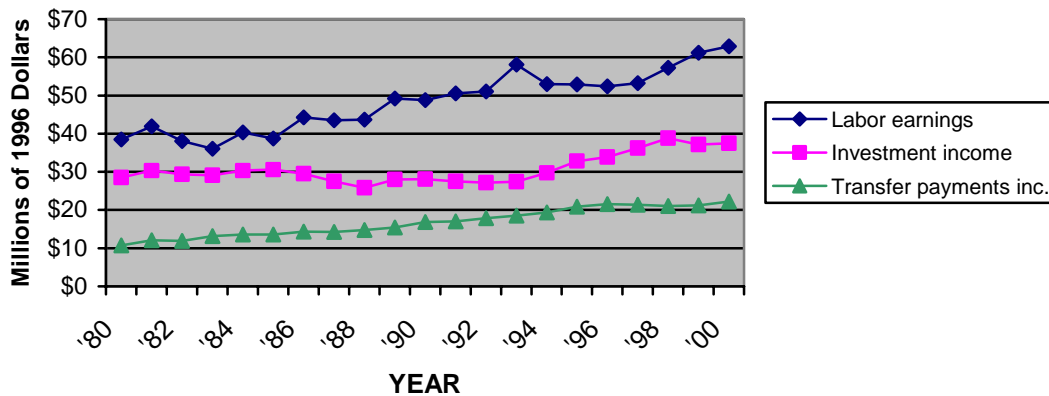
With these changes in age structure, birth rates fall and death rates may rise. In Madison County the number of births per 1000 population has fallen from 14.6 annually in 1980 to 12.8 in 1990 and to 9.3 in 1999. For these same years, the death rate is 11.6, 11.4, and 10.6. In Beaverhead, the birth rate has fallen from as high as 18.8 in 1980 to 9.4 in 1999, with

corresponding death rates of 11.4 and 10.9. For both counties, the death rate is now slightly higher than the birth rate, probably for the first time since settlement. As a result, future population trends in both counties will largely be determined by migration patterns. For comparative purposes, the birth rate in the 28 BLM peer counties has fallen from 22.6 in 1980 to 14.4 in 1999.

Personal Income Growth and Change

Personal income is all income received by individuals and households from all sources, including income from work (labor income), income from investments (rent, stock dividends, interest earnings, capital gains, etc.), and income from transfer payments (Social Security benefits, payments from Medicare and Medicaid, and a wide range of social welfare programs). Total personal income in Madison County has risen from around \$70 million annually in the late '70s, to \$85 million annually in the late '80s, and to over \$122 million in the year 2000, with all figures in 1996 inflation-adjusted dollars. **Figure 8** shows growth in personal income by major source over this period.

**Figure 8: Total Personal Income by Source
in Madison County**



The largest source of personal income is labor earnings and these have grown from less than \$40 million annually in the early '80s to nearly \$63 million in 2000. On a year-to-year basis, changes in labor income tend to fluctuate up and down, reflecting vacillating economic conditions. In Madison County, labor earnings have accounted for about half of all personal income over the last twenty years. This is a relatively low proportion of personal income. For Montana as a whole, labor earnings accounted for 61 percent of all income in 2000, down from 67 percent in 1980. Across the 28 BLM peer counties, labor earnings accounted for 61 percent of all income, down from 69 percent in 1980.

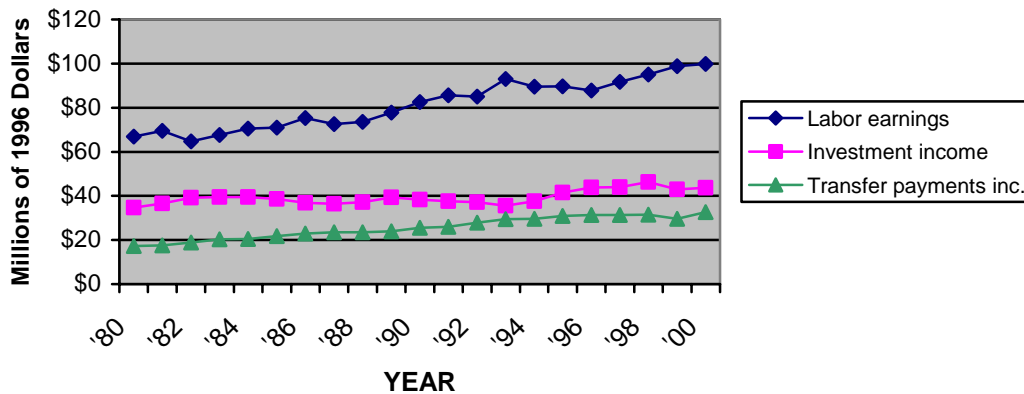
The second largest source of area income is investment income. It has risen from over \$25 million annually in the late '80s to over \$37 million more recently, accounting for 31 percent of personal income in Madison County. Statewide, investment income accounts for 23 percent of total personal income, up from 21 percent in 1980. So, its share of personal income is growing over time, largely reflecting population aging, with older adults more prone to have investment income than younger adults. In the 28 BLM peer counties, investment income accounted for 22 percent of all area income in 2000, up from 20 percent in 1980. So, investment income accounts for a disproportionate share of income in Madison

County. Investment income growth is less volatile than labor income growth, but as can be seen in the figure above, it can fall as well as rise. In Madison County, these swings may be closely associated with changing land values, that become reflected in capital gains through land sale transactions.

The third and last major source of income is transfer payments. In Madison County transfer payment income has risen from less than \$11 million annually in the late '70s, to less than \$15 million in the late '80s, and to over \$22 million in 2000. Of this \$22 million, nearly \$12 million is in the form of Social Security retirement and disability benefits and nearly \$7 million is in medical payments (Medicare and Medicaid). In the county transfer payments accounted for 18 percent of all income in 2000, which compares with 16 percent statewide and 17 percent for the 28 BLM peer counties.

Personal income by major source in Beaverhead County is shown in **Figure 9**. Total personal income received by county residents has grown from over \$120 million in the late '70s, to over \$134 million in the late '80s, and to over \$176 million in 2000. The largest source of personal income in the county is labor income, accounting for 57 percent of all income in 2000. Labor earnings grew from nearly \$74 million in the late '80s to nearly \$100 million in 2000.

**Figure 9: Total Personal Income by Source
in Beaverhead County**



The second largest source of income in the county is investment income, growing slowly from over \$37 million in the late '80s to over \$43 million in 2000, and accounting for 25 percent of all income. Transfer payments have increased from \$16 million in the late '70s, to \$24 million in the late '80s, and to almost \$33 million in 2000, accounting for 19 percent of area income. This is slightly higher than the income share for transfer payments statewide of 16 percent. Of this \$33 million in transfer payments, nearly \$14 million is Social Security benefits and \$12 million in medical benefits.

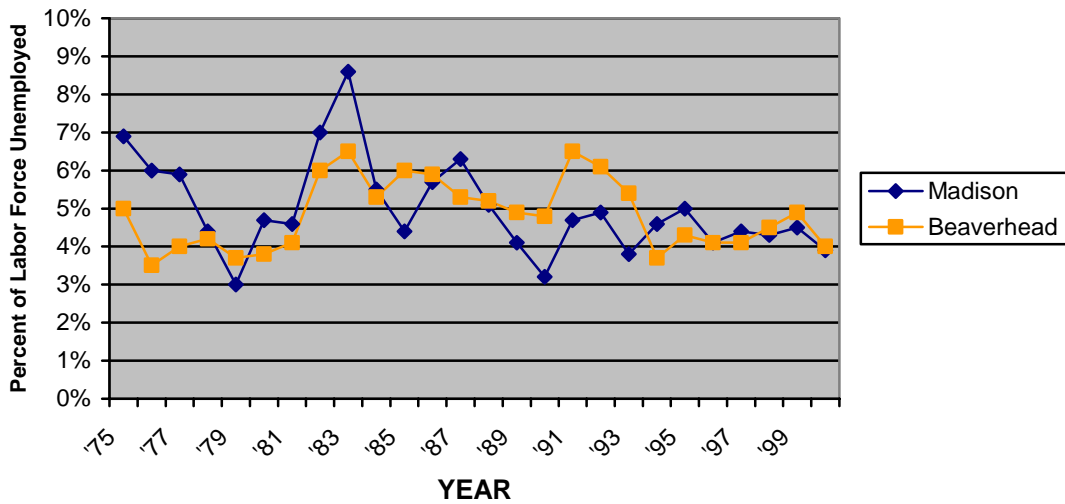
As the populations of Beaverhead and Madison Counties continue to age, it is probable that labor earnings as a share of total personal income will gradually decline, particularly as the

large population segment currently at ages between 40 and 60 moves into retirement.

Labor Force Trends

An area's civilian labor force is made up of all individuals 16 years of age and older that are actively seeking employment or already employed. The size of the labor force and the number of persons in the labor force that are unemployed is regularly reported by the U.S. Bureau of Labor Statistics (BLS). The civilian labor force of Madison County has grown from 2,500 persons in 1980 to over 4,000 in the year 2000. In Beaverhead County, it has grown from over 4,100 to nearly 4,900 during this same period. **Figure 10** shows BLS estimates of average annual unemployment rates in each of the counties since 1975.

Figure 10: Area Average Annual Unemployment Rates

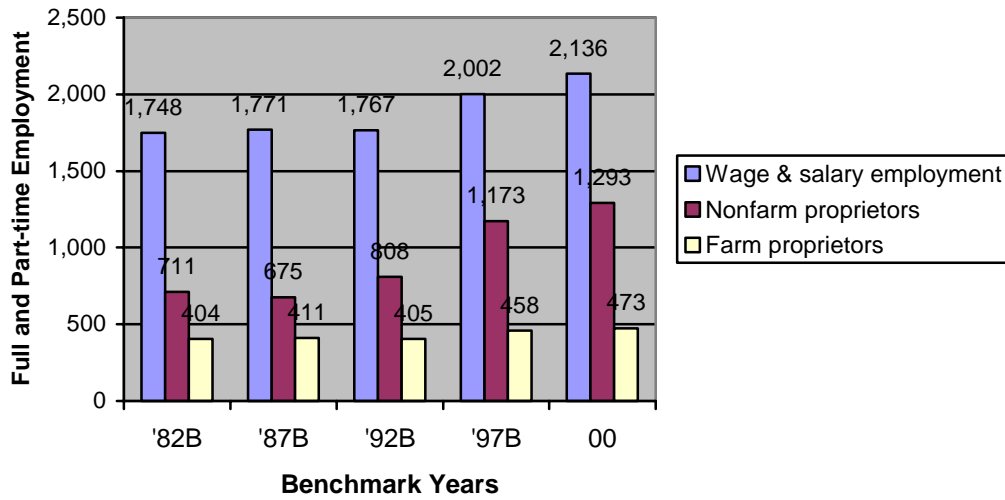


Recent unemployment rates in both counties are relatively low, based upon historical standards, with a 4.0 percent unemployment rate in Beaverhead County and a 3.9 percent rate in Madison. Unemployment levels rose in the early and mid-80s and have been largely trending downward since, with a brief interruption in this trend in the early '90s. Area unemployment rates seldom drop lower than 3 or 4 percent. So, it is readily apparent that area employment has grown to more than match area growth in the labor force.

As mentioned previously, labor earnings are the largest source of area personal income in both Madison and Beaverhead Counties. Labor income is earned through employment and area employment is of two major types; wage and salary employment (persons in the work force employed by others and paid a wage or salary) and proprietor employment (persons that are self-employed). **Figure 11** shows area employment over time in Madison County by major type, with proprietor or self-employment shown for nonfarm proprietors and farm proprietors.

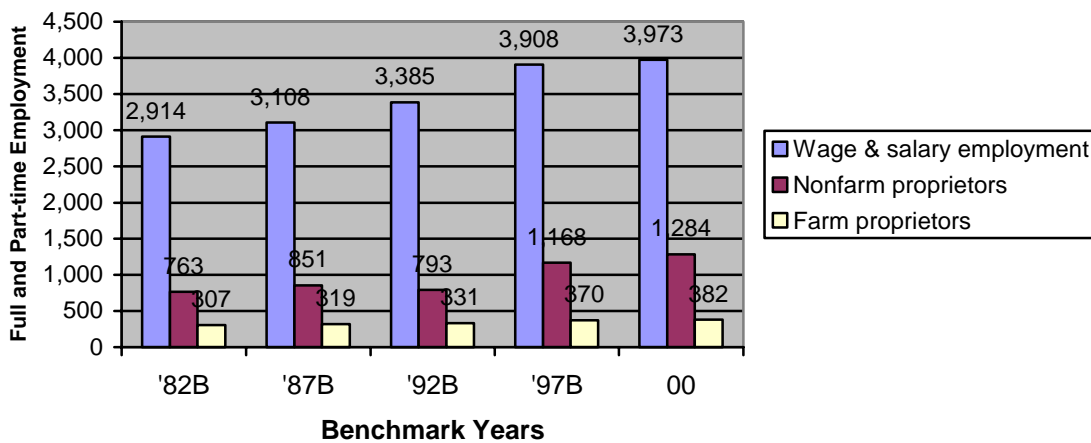
Employment Trends

Figure 11: Employment by Major Type in Madison County



These estimates include both full-time employment and part-time employment. A single person in the work force working two jobs is counted twice in these employment numbers, which are reported by the Bureau of Economic Analysis of the U.S. Commerce Department. Figures for '82, '87, '92, and '97 are “benchmarked,” that is, they are three-year averages around those benchmark years. Wage and salary employment has grown from nearly 1,750 in the early '80s to 2,136 by the year 2000, accounting for 55 percent of all employment in Madison County in 2000, down from over 60 percent in the early '80s. This decline in share is the result of more rapid growth in nonfarm proprietor employment, which accounted for 33 percent of all employment in 2000, up from 25 percent in the early '80s. Farm proprietor employment, while rising slowly, has declined as a share of all employment from 14 percent to 12 percent. **Figure 12** shows the same employment figures for Beaverhead County.

Fig. 12: Employment by Major Type in Beaverhead County

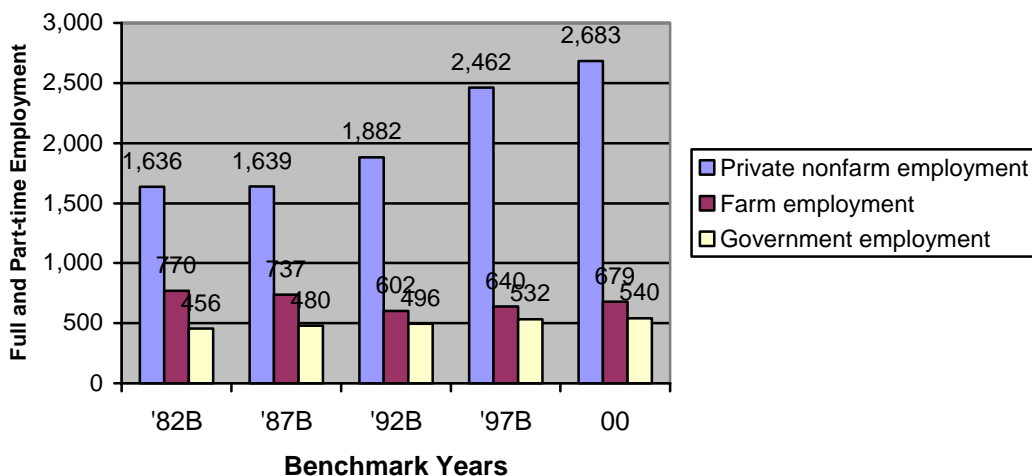


Wage and salary employment accounts for over 70 percent of all employment in Beaverhead County and has grown from 2,900 in the early '80s to 3,973 in the year 2000. Nonfarm proprietor employment is a much smaller percentage of total employment in Beaverhead than in Madison County; 23 percent versus 33 percent. And farm proprietor employment has slowly increased, but declined as a share of total employment.

Total employment also can be evaluated in terms of private versus public or government employment, as shown for Madison County in

Figure 13. Private employment is much greater than public employment in the county. Private nonfarm employment accounted for 69 percent of all employment in 2000, up from 57 percent in the early '80s, with farm employment (proprietors and farm workers) accounting for 17 percent in 2000, up from 16 percent in the early '80s. Government employment, including public employment by all levels of government – federal, U.S. military, state, and local, including public education – accounted for 14 percent of all county employment, down from 16 percent in the early '80s.

Fig. 13: Private vs. Public Employment in Madison County



The breakdown of private and public employment in Beaverhead County displayed in **Figure 14** is very similar to that of Madison County, except that there is a higher proportion of government employment. In Beaverhead County, private nonfarm employment has grown from 2,460 in the early '80s, accounting for 62 percent of all employment, to over 3,820 in 2000, accounting for 68 percent of employment. Government employment of all types has grown from 840 to 1,043 during this same period. But because it is growing slowly relative to private employment, its share of total employment has fallen from 21 to 18 percent. Farm employment of all types has increased modestly in Beaverhead County, rising from 685 in the early

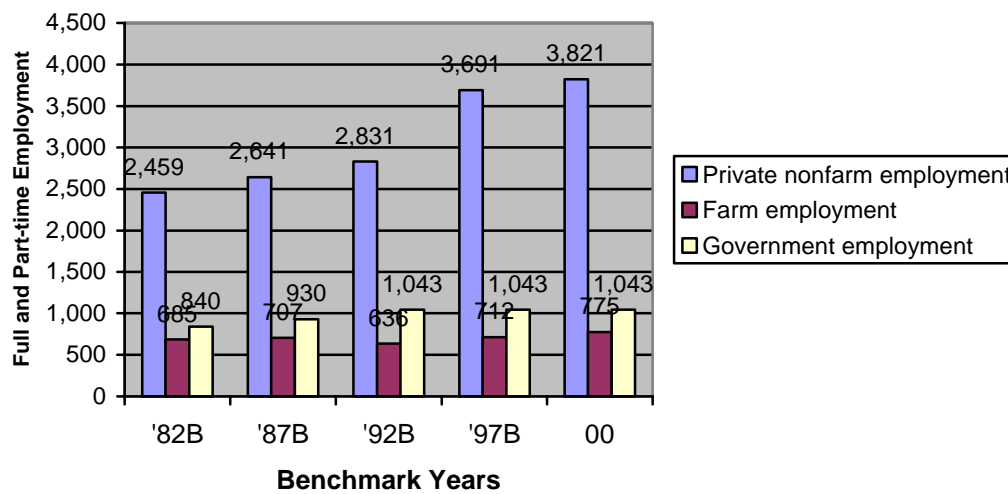
'80s to 775 in 2000, and accounting for 14 percent of all employment.

The composition of government employment is widely different in the two counties. In Madison County government employment is largely by local government, including public education. Of the 540 total government employees in the county in 2000, over 400 were employed by local government, over 75 percent. In Beaverhead County, of the 1,043 total public employees in 2000, just over 400 are in local government (about 38 percent). The second largest category of public employees in the county is state government, largely due to the presence of The University of Montana – Western in Dillon. The federal government also

has significant employment in both Beaverhead

and Madison Counties.

Fig. 14: Private vs. Public Employment in Beaverhead Co



Most employment in both Madison and Beaverhead Counties is in the private sector, but there have been large shifts in the makeup of area employment by major sector over the last twenty years. There are nine major sectors within the nonfarm private sector of the economy including:

1. **Services**, including businesses and establishments engaged in health care; business services; legal services; engineering and management services; social services such as day care centers, family counseling, etc.; auto repairs; amusement and recreation services; hotels and other lodging places; membership organizations such as churches; and others;
2. **Retail Trade**, including food stores; home furnishing stores; general merchandise stores; building material stores; auto dealers; apparel stores; eating and drinking places; and others;
3. **Manufacturing**, including all firms producing durable (such as lumber) and non-durable products for commercial sale and distribution;
4. **Construction**, including general building contractors, special trade contractors (carpenters, plumbers, electricians, etc.), and heavy construction contractors;
5. **Finance, Insurance and Real Estate (F.I.R.E.)**, including depository institutions like banks and savings and loans; and non-depository establishments engaged in insurance and real estate businesses, etc.;
6. **Transportation and Public Utilities**; including railroads; trucking and warehousing; local private transportation; and private communications and utility companies;
7. **Wholesale Trade**, including establishments that primarily sell merchandise to other businesses;
8. **Agricultural, Forestry and Fishery Services**, including firms providing services to ag producers and to timber owners and managers; and
9. **Mining**, which includes companies engaged in all aspects of mining including coal mining, metals and non-metals mining, and oil and gas extraction and exploration.

Figures 15 and 16 show changing employment levels for these major private nonfarm sectors of the economy in Madison and Beaverhead Counties since 1980 through 2000.

Figure 15: Private Nonfarm Employment by Sector in Madison County

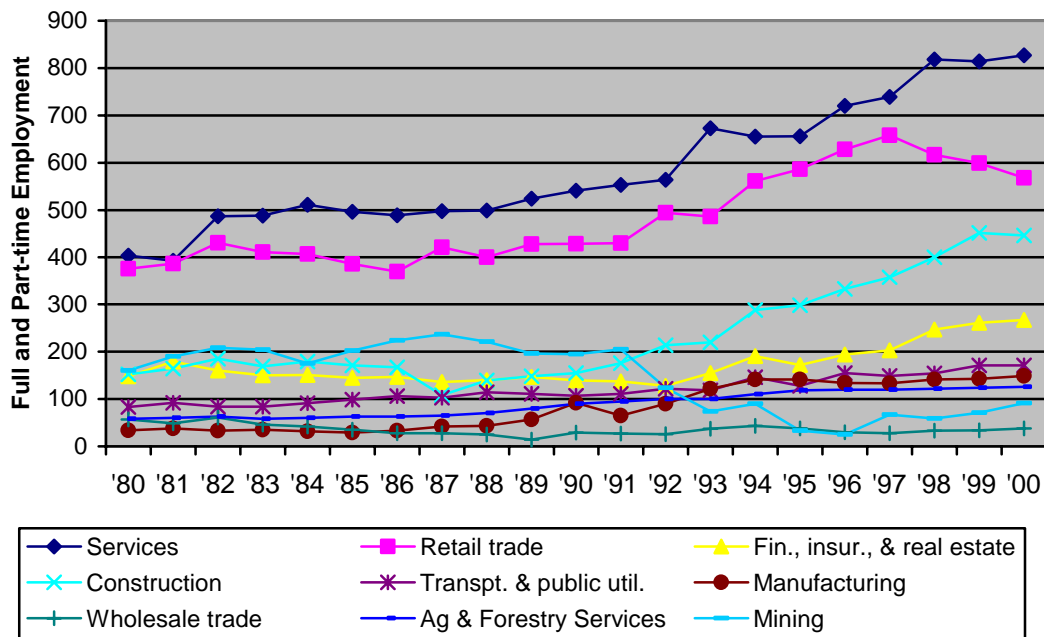
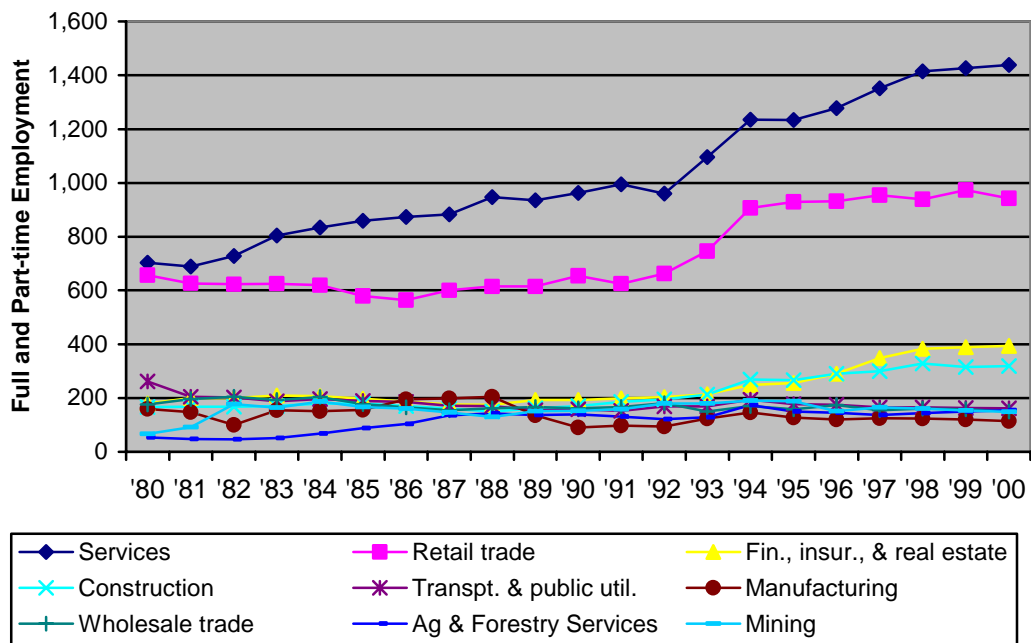


Figure 16: Private Nonfarm Employment by Sector in Beaverhead County.



In both counties, there greatest employment growth is occurring in services and retail trade, however, construction employment also is seeing large increases in both counties, particularly in Madison County. The other six sectors have been largely flat over the entire period in terms of employment growth.

Area Economic Restructuring and Change

A better understanding of the type of economic restructuring that is occurring in Madison and Beaverhead Counties can be gained by closely examining income change in the counties at many different levels, including the level of sub-sectors. **Tables 38 and 39** show economic change in the two counties by examining income change by major source and labor income change by major sector. There are over 70 different sub-sectors of the economy and the tables also show which of these are “fastest-growing” during the period from 1987 to 1997, a period of considerable economic restructuring and change in both counties.

As shown in **Table 38**, total personal income grew from over \$85 million in 1987 to nearly \$111 million in 1997, a more than \$25 million increase or increase of 30 percent. Population grew by 15 percent during this period, resulting in an increase in total personal income per person or per capita income of 13 percent. Per capita income rose from \$14,412 in 1987 to \$16,327 in 1987 and to \$17,832 in 2000, all in 1996 inflation-adjusted dollars. In Beaverhead County (shown on **Table 39**) total personal income rose from over \$132 million in 1987 to nearly \$167 million in 1997, an increase of over \$34 million or 26 percent. Population grew by 9 percent during the period from 1987 to 1997 and per capita income rose from \$15,660 to \$18,046, a 15 percent increase.

The next section of each table then shows how personal income changed by major component

during this period. In Madison County labor earnings grew the most, rising from \$43 million in 1987 to \$53 million in 1997, an increase of nearly \$10 million or 22 percent. Investment income grew by almost \$9 million during this period, a 32 percent increase; and transfer payments grew by over \$7 million, a 50 percent increase. Together, investment income and transfer payments accounted for well over half of all income growth in Madison County during this period.

In Beaverhead County labor income rose by over \$19 million and 26 percent, reaching nearly \$92 million in 1997. Transfer payments were the second fast-growing income source, rising by nearly \$8 million between 1987 and 1997, a 33 percent increase. And investment income grew by almost \$8 million as well, or 21 percent. These latter two non-labor sources of income accounted for 45 percent of all income growth during the period in the county.

The third section of each table then shows labor earnings changes by major sector of the economy over this period, with sectors rank-ordered by amount of labor income growth during the 1987-97 period. These labor income figures measure the amount of wages and salaries and self-employment income received by all persons employed in each sector. Services are the fast-growing sector in Madison County, with labor earnings rising by \$4.3 million. Construction also is fast-growing, increasing by over \$4 million annually during the period, a whopping 142 percent increase in annual labor earnings. Together services and construction accounted for over \$8 million in labor income gains during the period, over 80 percent of all labor income growth in the county. Manufacturing also saw considerable growth, although starting from a small base, as did several other sectors. Declines occurred in both net farm earnings and mining labor earnings.

Table 38. Madison County Income Growth and Change

				Change: '87 - '97	
				Amt.	%
Income and Population					
Total Personal Income (thous.\$)	\$85,212	\$110,814	\$122,539	\$25,602	30%
Population	5,913	6,787	6,872	874	15%
Per Capita Income	\$14,412	\$16,327	\$17,832	\$1,915	13%
<i>Thousands of 96 Dollars</i> Components of Total Personal Income					
#1 Labor earnings	\$43,513	\$53,213	\$62,844	\$9,700	22%
share of total income	51%	48%	51%	38%	
#2 Investment income	\$27,469	\$36,224	\$37,485	\$8,755	32%
share of total income	32%	33%	31%	34%	
#3 Transfer Payments	\$14,231	\$21,377	\$22,211	\$7,146	50%
share of total income	17%	19%	18%	28%	
Labor Income by Sector					
#1 Services	\$5,564	\$9,884	\$11,424	\$4,320	78%
#2 Construction	\$2,837	\$6,865	\$10,328	\$4,028	142%
#3 Government	\$10,560	\$12,559	\$13,428	\$1,999	19%
#4 Retail Trade	\$5,386	\$6,861	\$6,110	\$1,475	27%
#5 Manufacturing	\$810	\$2,284	\$2,772	\$1,474	182%
#6 F.I.R.E.	\$1,541	\$2,640	\$3,494	\$1,099	71%
#7 Transpt. & public utilities	\$3,968	\$4,727	\$5,397	\$759	19%
#8 Ag Services	\$630	\$650	\$660	\$20	3%
#9 Wholesale Trade	\$453	\$436	\$726	-\$17	-4%
#10 Net Farm	\$1,648	\$136	\$1,287	-\$1,512	-92%
#11 Mining	\$7,019	\$1,023	\$1,318	-\$5,996	-85%
<i>Thousands of 96 Dollars</i> Fastest Growing Sub-Sectors (gains of more than \$500 ths. & 25%)				Amt.	%
#1 Special Trade Contractors	\$1,303	\$3,605	\$6,236	\$2,302	177%
#2 General Building Contractors	\$1,463	\$3,100	\$3,922	\$1,637	112%
#3 Durable Goods Manufacturing	\$730	\$2,209	\$2,673	\$1,479	203%
#4 Trucking & Warehousing	\$2,150	\$3,466	\$3,700	\$1,316	61%
#5 Hotels & Other Lodging	\$894	\$2,034	\$1,821	\$1,140	128%
#6 Other F.I.R.E. (insur., real est.)	\$529	\$1,640	\$2,294	\$1,111	210%
#7 Eating & Drinking Places	\$1,450	\$2,233	\$2,163	\$783	54%
#8 Engineering & Managmt. Serv.	\$27	\$771	\$1,144	\$744	2756%
#9 Railroad Transportation	\$195	\$931	\$1,362	\$736	377%
#10 Health Care Services	\$1,789	\$2,518	\$2,889	\$729	41%
#11 Personal Services	\$477	\$1,150	\$1,250	\$673	141%
#12 Miscellaneous Services	\$409	\$936	\$1,000	\$527	129%
Subtotal	\$11,416	\$24,593	\$30,454	\$13,177	115%
share of total labor income	26%	46%	48%	136%	
Declining Sub-Sectors					
Home Furniture Stores	\$187	\$50	\$40	-\$137	-73%
General Merchandise Stores	\$691	\$508	\$332	-\$183	-26%
Transpt. Other than RRs/Truck	\$1,623	\$330	\$335	-\$1,293	-80%
Farm & Ranch net earnings	\$1,648	\$136	\$1,287	-\$1,512	-92%
Mining	\$7,019	\$1,023	\$1,318	-\$5,996	-85%
Subtotal	\$11,168	\$2,047	\$3,312	-\$9,121	-82%

Source: Regional Economies Assessment Database (READ), O'Connor Center for the Rocky Mountain West, U. of MT

Table 39. Beaverhead County Income Growth and Change

				Change: '87 - '97	
				Amt.	%
Income and Population					
Total Personal Income (thous. 6\$)	1987	1997	2000		
	\$132,485	\$166,820	\$176,117	\$34,335	26%
Population	8,460	9,244	9,195	784	9%
Per Capita Income	\$15,660	\$18,046	\$19,154	\$2,386	15%
<i>Thousands of 96 Dollars</i> Components of Total Personal Income					
#1 Labor earnings	\$72,661	\$91,703	\$99,889	\$19,042	26%
share of total income	55%	55%	57%	55%	
#2 Transfer payments	\$23,486	\$31,269	\$32,594	\$7,783	33%
share of total income	18%	19%	19%	23%	
#3 Investment income	\$36,337	\$43,848	\$43,635	\$7,511	21%
share of total income	27%	26%	25%	22%	
Labor Income by Sector					
#1 Services	\$11,202	\$19,444	\$21,248	\$8,242	74%
#2 F.I.R.E.	\$2,410	\$8,557	\$9,317	\$6,147	255%
#3 Government	\$24,790	\$28,447	\$29,847	\$3,657	15%
#4 Mining	\$5,607	\$8,840	\$8,261	\$3,233	58%
#5 Construction	\$3,630	\$6,423	\$6,506	\$2,793	77%
#6 Net Farm	\$5,309	\$6,862	\$11,976	\$1,553	29%
#7 Retail Trade	\$9,041	\$10,348	\$10,072	\$1,307	14%
#8 Wholesale Trade	\$3,258	\$2,639	\$2,535	-\$619	-19%
#9 Ag & Forest. Services	\$2,129	\$1,058	\$1,374	-\$1,071	-50%
#10 Transpt. & Public Utilities	\$7,108	\$4,940	\$4,600	-\$2,168	-31%
#11 Manufacturing	\$4,696	\$2,049	\$1,942	-\$2,647	-56%
<i>Thousands of 96 Dollars</i> Fastest Growing Sub-Sectors (gains of more than \$400 ths. & 30%)				Amt.	%
#1 Other F.I.R.E. (insur., real est.)	\$807	\$6,857	\$7,517	\$6,050	750%
#2 Health Care Services	\$5,274	\$10,387	\$9,256	\$5,113	97%
#3 Mining	\$5,607	\$8,840	\$8,261	\$3,233	58%
#4 Special Trade Contractors	\$1,717	\$3,669	\$4,178	\$1,952	114%
#5 Eating & Drinking Places	\$1,709	\$2,597	\$2,463	\$888	52%
#6 Engineering & Managmt. Serv.	\$100	\$827	\$1,173	\$727	727%
#7 Nondurable Goods Manuf.	\$640	\$1,274	\$1,460	\$634	99%
#8 General Building Contractors	\$716	\$1,300	\$1,400	\$584	82%
#9 Business Services	\$740	\$1,227	\$1,743	\$487	66%
#10 Amusement & Recreation Serv.	\$216	\$689	\$987	\$473	219%
#11 Food Stores	\$1,279	\$1,749	\$1,726	\$470	37%
#12 Hotels & Other Lodging	\$1,130	\$1,562	\$1,818	\$432	38%
Subtotal	\$19,935	\$40,978	\$41,982	\$21,043	106%
share of total labor income	27%	45%	42%	111%	
Declining Sub-Sectors					
Forestry Services	\$610	\$102	\$166	-\$508	-83%
Agricultural Services	\$1,519	\$956	\$1,208	-\$563	-37%
Trucking & Warehousing	\$1,748	\$1,129	\$1,292	-\$619	-35%
Wholesale Trade	\$3,258	\$2,639	\$2,535	-\$619	-19%
Railroad Transportation	\$2,149	\$1,000	\$785	-\$1,149	-53%
Durable Goods Manufacturing	\$4,056	\$775	\$482	-\$3,281	-81%
Subtotal	\$13,340	\$6,601	\$6,468	-\$6,739	-51%

Source: Regional Economies Assessment Database (READ), O'Connor Center for the Rocky Mountain West, U. of MT

Services also is the single fastest growing sector in Beaverhead County, increasing by 74 percent during the period, an increase of over \$8 million in labor earnings. Labor earnings by those employed in the large and diverse F.I.R.E. sector grew by over \$6 million, almost tripling in amount over the level ten years earlier. Sizeable gains also occurred in government, mining, and construction. Losses occurred in three major sectors including manufacturing (loss of \$2.6 million), transportation and public utilities (loss of \$2.2 million), and ag and forestry services (down over \$1 million).

The next section down in each table then shows which sub-sectors of the economy experienced the greatest change. There are twelve sub-sectors of the economy in Madison County that had gains in labor earnings of over \$500,000 and 25 percent during the period from 1987 to 1997. These include several construction sub-sectors (special trade contractors, up \$2.3 million, and general building contractors, up \$1.6 million). Durable goods manufacturing increased tremendously, rising by over 200 percent. Several sub-sectors linked to travel and tourism are growing rapidly, including hotels and lodging (up \$1.1 million) and eating and drinking places (up \$780,000). Trucking and railroads increased significantly as did many sub-sectors within the large services sector (engineering and management, health care, personal services, and miscellaneous). At the bottom of the table are sub-sectors seeing significant declines. In Madison County, these include mining, farming and ranching (net receipts), and several others.

In Beaverhead County, the single fastest growing sub-sector of the economy is “other F.I.R.E.,” which largely includes persons employed in real estate development and sales, insurance, and financial services. This segment of the economy saw a \$6 million increase in labor earnings, which largely accounts for all the gains by the F.I.R.E. sector as a whole in the county. Several construction sub-sectors are fast-growing (special trade contractors and general building contractors), as are many services (health care, engineering and

management, business services). And several sub-sectors linked to travel and tourism are growing rapidly (eating and drinking places, amusement and recreation services, hotels and lodging). Declining sub-sectors include durable goods manufacturing (down nearly \$7 million), railroads, wholesale trade, trucking and warehousing, and ag and forestry services.

With these differential rates of growth among sectors and sub-sectors of the economy, the essential workings of the economies of each of these counties are changing. The area is developing different dependencies. One way of examining this is by isolating segments of these economies that are “basic” in nature. Certain segments of an area economy have greater importance because of their ability to bring “outside income” to an area. Income from sources outside the area, once received by households and individuals, is re-spent generating additional income and employment in the area.

An area’s economic base includes all sectors providing income to area residents from non-local sources. This external income can be received as investment income (rent, interest earnings, dividends, capital gains), as transfer payments (Social Security and Medicare/Medicaid, etc.), and as labor income, so long as that labor income is traceable to outside sources. **Tables 40 and 41** show estimates of the area economic bases of both Madison County and Beaverhead County over time. Since transfer payments come from a source external to the local area at the time they are received by individuals, they can be considered part of an area’s economic base. In fact, there are many areas of the U.S. such as retirement havens that depend heavily on transfer payments. In Madison County, transfer payments are the largest source of external income, rising from \$14.4 million in the late ‘80s to over \$21 million in 1999, the last year in the economic base tables. Transfer payments are also the largest source of outside income in Beaverhead County, increasing from \$23 million to nearly \$30 million during this period.

Table 40. Madison County Economic Base

<i>Sources of external income into the area economy.</i>							
<i>Millions of 1996 Dollars</i>	1987B*	1992B	1997B	1999	Growth: '87 - '97	Sector '99	
						Share	Total
NON-LABOR SOURCES	\$22.7	\$26.0	\$32.2	\$32.4	\$9.5	55%	\$58.4
Share of Base	54%	51%	61%	57%			
#1 Transfer Payments	\$14.4	\$17.8	\$21.3	\$21.2	\$6.9	100%	\$21.2
#2 Investment Inc. (30%)	\$8.3	\$8.2	\$10.9	\$11.1	\$2.6	30%	\$37.1
Total invest. Inc.	\$27.6	\$27.3	\$36.3	\$37.1			
LABOR INCOME SOURCES	\$19.1	\$25.3	\$21.0	\$24.6	\$1.9	44%	\$55.5
Share of Base	46%	49%	39%	43%			
#3 Out-of-County Commuter Labor Earnings (Share)	\$5.3 13%	\$7.1 14%	\$8.9 17%	\$9.4 16%	\$3.6	100%	\$9.4
#4 Trade and Services	\$0.8	\$2.3	\$4.3	\$6.7	\$3.5	18%	\$37.5
Share of Base	2%	4%	8%	12%			
Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%	\$10.9
Transpt. & Pub. Util.	\$0.0	\$0.0	\$0.0	\$0.2	\$0.0	4%	\$5.6
Fin., Insur., Real Est.	\$0.0	\$0.0	\$0.1	\$0.4	\$0.1	11%	\$3.5
Retail Trade	\$0.1	\$0.7	\$0.1	\$0.0	\$0.1	0%	\$6.3
Construction	\$0.7	\$1.6	\$4.1	\$6.0	\$3.4	57%	\$10.6
Wholesale Trade	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%	\$0.6
#5 Fed. & State Govt.	\$3.7	\$4.1	\$4.3	\$4.1	\$0.6	100%	\$4.1
Share of Base	9%	8%	8%	7%			
#6 Manufacturing	\$0.7	\$1.6	\$2.3	\$2.3	\$1.6	100%	\$2.3
Share of Base	2%	3%	4%	4%			
#7 Agriculture	\$1.6	\$5.7	\$0.5	\$1.3	-\$1.2	100%	\$1.3
Share of Base	4%	11%	1%	2%			
#8 Mining	\$7.0	\$4.6	\$0.8	\$0.9	-\$6.2	100%	\$0.9
Share of Base	17%	9%	1%	2%			
Total Economic Base	\$42	\$51	\$53	\$57	\$11.4		
Total Personal Income	\$85.9	\$98.4	\$111.9	\$119.6	\$26.1		
Base Income Multiplier	2.05	1.92	2.10	2.10			

Source: Regional Economies Assessment Database (READ), O'Connor Center for the Rocky Mountain West, U. of Montana

* Values for 1987, 1992, and 1997 are "benchmarked" (three-year averages around each year).

Table 41. Beaverhead County Economic Base

<i>Sources of external income into the area economy.</i>							
<i>Millions of 1996 Dollars</i>	1987B*	1992B	1997B	1999	Growth: '87 - '97	Sector '99	
						Share	Total
NON-LABOR SOURCES	\$34.3	\$38.7	\$44.7	\$42.4	\$10.4	59%	\$72.5
<i>Share of Base</i>	49%	46%	49%	46%			
#1 Transfer Payments	\$23.3	\$27.7	\$31.3	\$29.5	\$8.0	100%	\$29.5
#4 Investment Inc. (30%)	\$11.0	\$11.0	\$13.4	\$12.9	\$2.4	30%	\$42.9
<i>Total invest. Inc.</i>	\$36.7	\$36.7	\$44.6	\$42.9			
LABOR INCOME SOURCES	\$36.2	\$45.9	\$45.7	\$50.5	\$9.5	55%	\$91.1
<i>Share of Base</i>	51%	54%	51%	54%			
#8 Out-of-County Commuter Labor Earnings	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		
#5 Trade and Services	\$1.1	\$1.1	\$8.2	\$8.5	\$7.1	15%	\$56.3
<i>Share of Base</i>	2%	1%	9%	9%			
Services	\$0.0	\$0.0	\$2.9	\$2.9	\$2.9	13%	\$21.5
Transpt. & Pub. Util.	\$0.2	\$0.0	\$0.0	\$0.0	-\$0.2	0%	\$5.6
Fin., Insur., Real Est.	\$0.0	\$0.5	\$4.2	\$5.2	\$4.2	53%	\$9.7
Retail Trade	\$0.9	\$0.0	\$0.6	\$0.4	-\$0.3	4%	\$10.4
Construction	\$0.0	\$0.6	\$0.5	\$0.0	\$0.5	1%	\$6.6
Wholesale Trade	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%	\$2.5
#2 Fed. & State Govt.	\$16.9	\$17.8	\$19.0	\$18.4	\$2.1	100%	\$18.4
<i>Share of Base</i>	24%	21%	21%	20%			
#7 Manufacturing	\$4.6	\$1.7	\$1.9	\$2.3	-\$2.7	100%	\$2.3
<i>Share of Base</i>	7%	2%	2%	2%			
#3 Agriculture	\$7.9	\$17.6	\$7.8	\$13.2	-\$0.1	100%	\$13.2
<i>Share of Base</i>	11%	21%	9%	14%			
#6 Mining	\$5.7	\$7.6	\$8.8	\$8.2	\$3.1	890%	\$0.9
<i>Share of Base</i>	14%	15%	17%	14%			
Total Economic Base	\$71	\$85	\$90	\$93	\$19.9		
Total Personal Income	\$133.9	\$152.3	\$167.5	\$171.3	\$33.6		
Base Income Multiplier	1.90	1.80	1.85	1.84			

Source: Regional Economies Assessment Database (READ), O'Connor Center for the Rocky Mountain West, U. of Montana

* Values for 1987, 1992, and 1997 are "benchmarked" (three-year averages around each year).

Transfer payments are increasing steadily as a source of area personal income throughout the United States and this trend will continue and could in fact accelerate as the U.S. population ages. As these moneys are received by individuals in local areas, they are spent on goods and services, generating considerable economic activity.

Investment income traceable to outside sources cannot be determined, but for purposes of this assessment, it is conservatively assumed that 30 percent of all investment income received by area residents is externally generated, that is, comes from sources outside of the local area. Under this assumption, this source of external income totaled \$8.3 million for the '87 benchmark period in Madison County, before rising to \$10.9 million during the '97 benchmark and to \$11.1 million in 1999. It is the second largest source of outside income in Madison County; second to only transfer payments. And these two non-labor sources of income together accounted for 57 percent of the county's entire economic base in 1999. In Beaverhead County investment income is the fourth largest component of the county's base, totaling \$12.9 million in 1999. Together with transfer payments, these non-labor income sources accounted for 46 percent of Beaverhead County's economic base in 1999.

Another source of external income for many counties in the U.S. is labor income earned by county residents who are employed outside of the county. This is particularly the case for non-metro counties with small populations that are nearby or closely-linked to counties with regional population centers. As indicated previously, both Madison and Beaverhead Counties are closely-linked to nearby regional center counties (Madison to Gallatin and the City of Bozeman and Beaverhead to Silver Bow and the City of Butte). For Madison County, county residents working at out-of-county jobs earned \$5.3 million in '87, which grew to \$9.4 million in '99, and accounted for 16 percent of all labor earnings by residents of the county. These out-of-county commuter labor earnings are the third largest component of Madison

County's economic base. In the case of Beaverhead County, out-of-county labor earnings are actually negative, meaning that the county is actually exporting some labor earnings from jobs in the county.

The next section of the economic base tables provides estimates of labor or employment sources of basic income. Labor earnings of some sectors of the economy are entirely treated as basic in nature, such as labor earnings from area employment in manufacturing, federal and state government, agriculture (including both net farm income and ag services), and mining. In the tables, the total amount of labor earnings generated by each of these sectors in the counties is shown. Federal and state government workers employed in Madison County earned \$4.1 million in labor income in 1999, making this segment of the economy the fourth largest component of the area economic base. Manufacturing added \$2.3 million in '99, accounting for 4 percent of the area base. Mining, which has seen considerable decline in recent years, added just under \$1 million in labor earnings, down from \$7 million in '87.

Agriculture, which includes both net farm earnings and labor earnings by ag service providers, totaled \$1.3 million. This is one sector whose contribution to the area economy can be badly under-estimated by simply focusing on "net earnings," since farmers and ranchers receive and expend much more than what they net at the end of the year. In Madison County, farmers and ranchers have received around \$40 million a year in total cash receipts and other income while expending more than \$40 million annually. Net income is usually a fraction of these amounts and swings from positive to negative over the course of years.

In Beaverhead County, labor earnings by federal and state government workers are the second largest component of the area's economic base, totaling over \$18 million in 1999 and accounting for 20 percent of basic income. Agriculture in Beaverhead County has fared better than in Madison County in recent years, netting over \$13 million in 1999 and accounting for 14

percent of the area base. Farmers and ranchers in the county have expended and received \$60 to \$70 million a year in recent years. Mining is much larger in Beaverhead County as well, providing basic labor income of over \$8 million in 1999 and accounting for 9 percent of basic income. Manufacturing has undergone considerable decline in the county, down from \$4.6 million in '87 to \$2.3 million in '99, when it accounted for 2 percent of basic income.

Labor earnings by those employed in trade and service sectors - like retail trade, construction, and finance, insurance and real estate - are largely considered non-basic, in that they are largely paid from sales to area residents. As such, labor earnings from these sectors would not be traceable to external sources. However, if sales and activity within these trade and service sectors are at levels beyond what is being supported by local residents only, they can be partly "non-basic" and partly "basic". Determining this can be done using what is referred to as "location quotient analysis." Using data compiled for counties across the entire western United States, location quotients have been calculated that provide "norms" for area ratios of levels of sector activity (as measured by labor income) to levels of area personal income. By relating these to similar ratios calculated for each trade and service sector in Madison and Beaverhead Counties, estimates have been made of the amount of basic income attributed to each sector. These are shown in each of the economic base tables under "Trade and Services."

In Madison County, about \$6.7 million in basic labor earnings were generated through trade and service sector activity beyond local demand, accounting for 12 percent of the area base in 1999. Most of this was generated by the construction sector. In Beaverhead County, about \$8.5 million in basic labor income was generated through trade and service sector activity in 1999, accounting for 9 percent of the area base. A large share of this is attributable to relatively high earnings in the F.I.R.E. sector, which provided an estimated \$5.2 million in basic income in '99.

These mixes of activities have provided an economic base in Madison County that totaled \$42 million in 1987, \$51 million in 1992, \$53 million in 1997, and \$57 million in 1999. By dividing total personal income by these estimates of total basic income, the area "income multiplier" for each county can be estimated. The income multiplier is the ratio of total personal income to basic income and indicates how much additional local income is generated by each additional dollar of basic income. In Madison County the income multiplier was 2.05 in 1987 and 2.10 in 1999. The latter ratio indicates that for each dollar in basic income, an addition \$1.10 is generated in non-basic or derivative income in the local area.

The total economic base of Beaverhead County was \$71 million in 1987, \$85 million in 1992, \$90 million in 1997, and \$93 million in 1999. The income multiplier in 1999 is 1.84, indicating that for each dollar in basic income received by county residents, an addition \$.84 is generated in non-basic income in the local area. This is a relatively small income multiplier. County-level income multipliers ordinarily range from 2.00 to 3.00. Higher income multipliers are usually found in areas with fairly complete and diverse economies; ones that contain the re-spending of outside income within the area longer after it is received. Areas with very low income multipliers are ones that cannot contain this re-spending where much of the new income is spent outside the area after it is received.

Key Industry Profiles

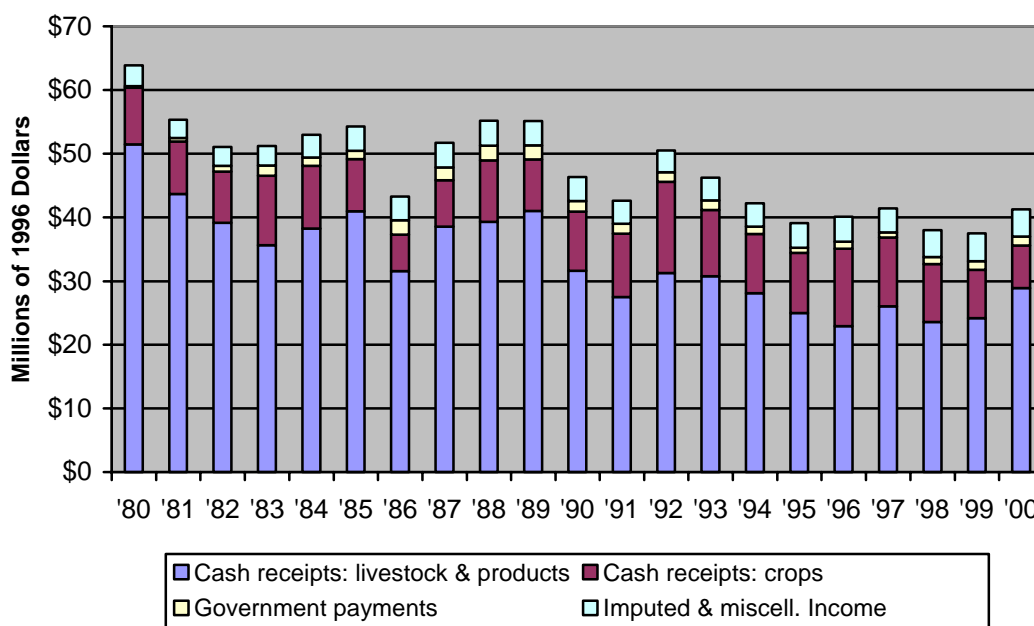
Because this assessment is being used by the federal Bureau of Land Management in evaluating its area management planning for BLM lands and because of the importance of agriculture in both counties, additional analysis is provided of each county's farm and ranch sector. Madison County had 460 farms at the time of the '97 Agricultural Census, compared to 360 in Beaverhead County. Both counties have added to farm numbers over time. Madison County had 418 farms in 1992 and 433 at the time of the '78 Ag Census. Beaverhead County had 345 farms in 1992 and 319 in 1978.

The land in farms in Madison County has varied from 1.09 million acres in 1978 to 1.27 million acres in 1992 and to 1.08 million acres in 1997. Land in farms in Beaverhead County has steadily fallen from 1.56 million acres in 1978 to 1.15 million acres in 1997. With land in farms remaining roughly constant or declining as farms have increased in numbers is suggestive of large operations being subdivided into smaller ones. Average farm size in Madison County in 1997 was 2,347 acres, compared to 3,200 acres per farm in Beaverhead County.

The number of farm proprietors in Madison County has increased from 405 in 1980 to 473 in

2000, according to employment data of the federal Bureau of Economic Analysis. Other farm employment in addition to proprietors was 339 in 1980 and 206 in 2000. In Beaverhead County, farm proprietors numbered 292 in 1980 and 382 in 2000, with other farm employment totaling 387 and 393 for these years, respectively. The income received by agricultural producers in each county comes from a variety of sources, but the largest source by far is cash receipts from sales of livestock and livestock products. **Figure 17** shows gross agricultural receipts of all farmers and ranchers in Madison County over the last 20 years.

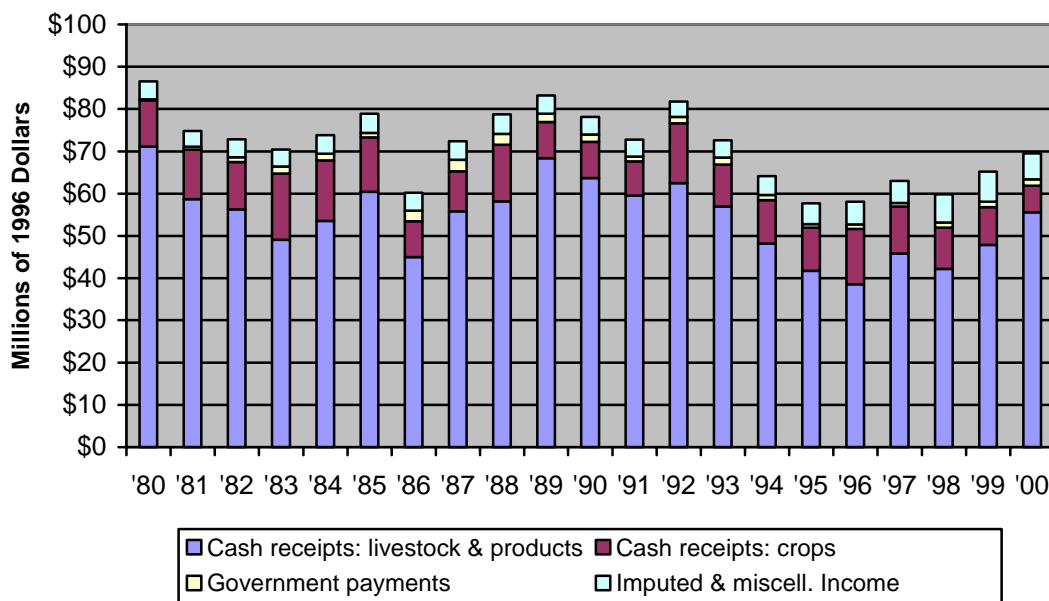
Fig. 17: Gross Ag Income by Type in Madison County



Gross receipts adjusted for inflation have been generally declining over much of the period, falling from over \$60 million in 1980 to around \$45 million by 1990. After a brief rise in 1992 to \$50 million, income declined once again and has plateau in more recent years at around \$40 million annually. The largest share of receipts is

from livestock sales, which have also been trending downward and fairly erratic. The second largest source of income is cash receipts from crops, but these are considerably less than livestock receipts. Similar information is shown for Beaverhead County in **Figure 18**.

Fig. 18: Gross Ag Income by Type in Beaverhead County



Agricultural receipts have been generally trending downward in Beaverhead County as well, but the overall decline hasn't been quite as great in relative terms. Total gross receipts total over \$85 million in 1990, sagged during the early '80s before rising back over \$80 million in 1989, and then dipped again during the mid-90s before increasing modestly in more recent years to around \$70 million in 2000. Receipts from livestock sales are the biggest source of income by far, followed by receipts from crop sales. Farmers and ranchers in both counties received very little income through government farm programs, largely because most of these benefits are attached to crop production programs. Income from sources other than these such as off-farm income is relatively small in both counties as well.

Figures 19 and 20 relate these total agricultural receipts to total agricultural expenditures on a yearly basis over time for each county. In Madison County, gross expenditures exceeded gross receipts from 1980 through 1987, in 1990 and 1991, and in every year since 1993. The economic picture for farmers and ranchers in

Beaverhead County has been very similar. Expenses exceeded receipts from 1980 to 1985, in 1986, and from 1994 to 1998.

Under these economic conditions, agricultural producers have been attempting to lower expenditures, as indicated by steadily falling gross expenditures in both counties. But gross receipts have steadily trailed off, largely offsetting any reductions in expenditures and keeping farmers and ranchers in the area in difficult straits. Cattle prices have been weak through much of this period and cattle inventories have been reduced to meet or to lower expenses. These constraints on agricultural producers have steadily reduced the dependencies of the area economy, particularly with steady growth in other non-farm sectors of the economy such as services, construction, government, retail trade, manufacturing, and finance, insurance and real estate. In addition to agriculture, the mining industry also has experienced deep declines in Madison County, although seeing some gains in Beaverhead County, as previously noted.

Fig. 19: Farm and Ranch Gross Income and Expenditures in Madison County

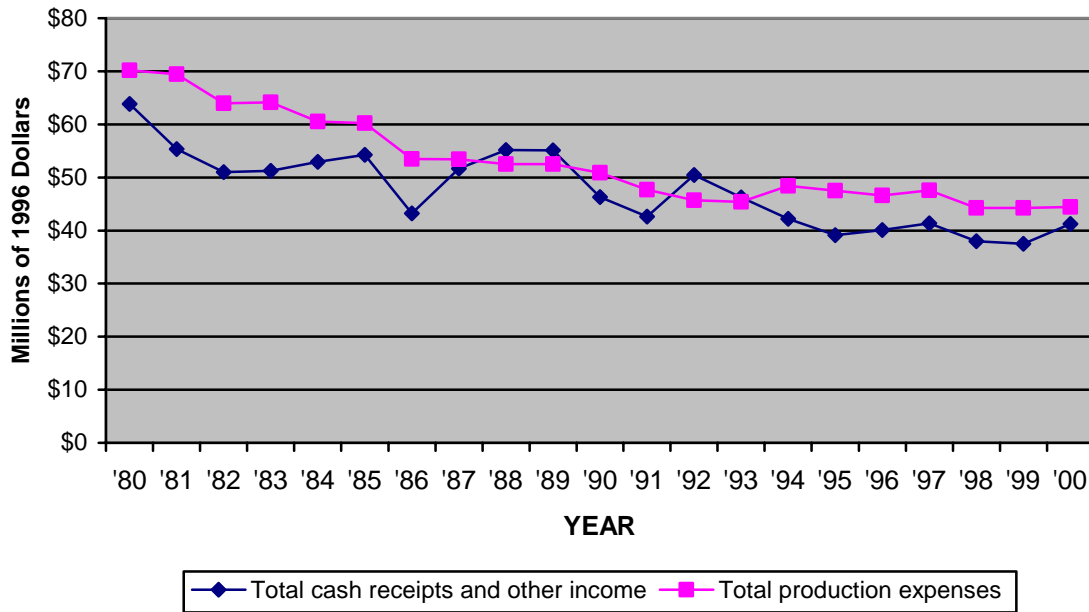
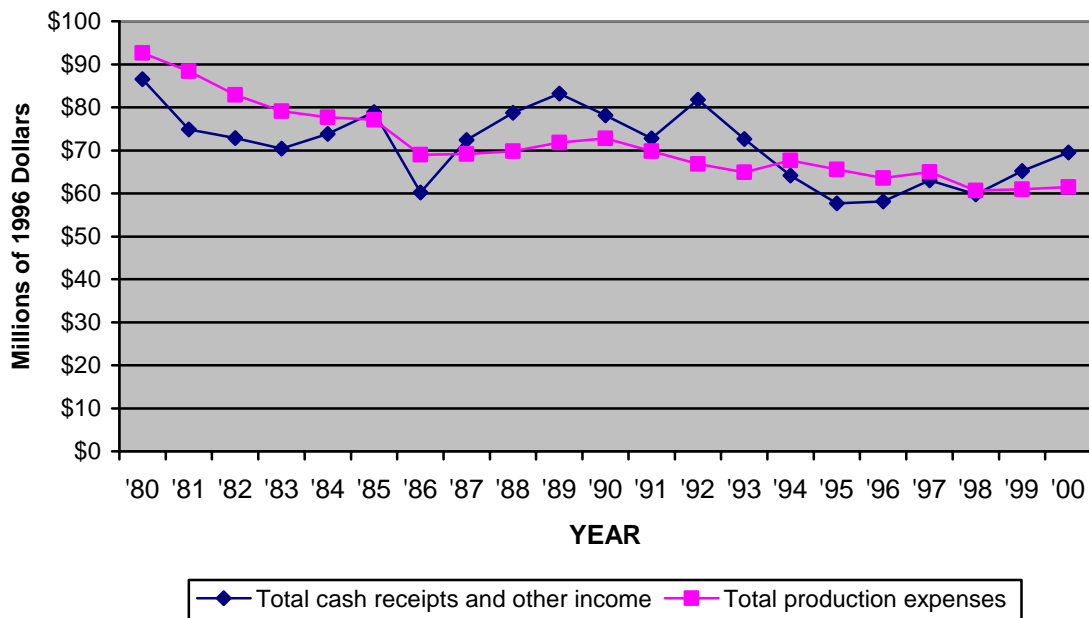


Fig. 20: Farm and Ranch Gross Income and Expenditures in Beaverhead County



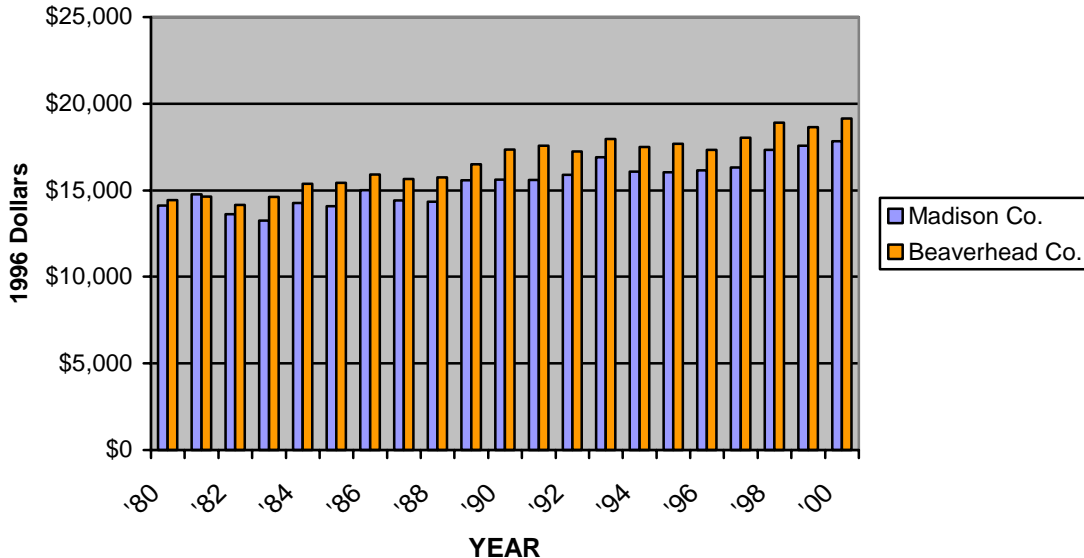
Area Economic Well-Being

While it is sometimes difficult to accurately measure area economic well-being or prosperity, a number of indicators are commonly used to gauge the quality of economic life in an area.

The most common measure used is per capita income, or total personal income per person.

Figure 21 shows per capita income levels for Madison and Beaverhead Counties over the period from 1980 to 2000, with figures in 1996 inflation-adjusted dollars

Fig. 21: Per Capita Income in Madison & Beaverhead Cos.



Per capita income in the year 2000 was \$17,832 in Madison County as compared to \$19,154 in Beaverhead County. Across the United States per capita income levels tend to be systematically higher in urban areas as compared to rural areas and systematically higher from one urban area to the next in going from smaller cities to larger ones. In the 28 BLM peer counties, per capita income was \$18,755 in 2000. So, using this as a norm, per capita income in Madison County is considerably below the norm, while per capita income in Beaverhead County is above the norm.

Per capita income growth in both counties has been generally steady. For Madison County, per capita income rose from \$14,131 in 1980 to \$15,620 in 1990, and to \$16,327 in 1997, before reaching \$17,832 in 2000. For Beaverhead County, per capita income rose from \$14,432 in 1980 to \$17,365 in 1990, and to \$18,046 in

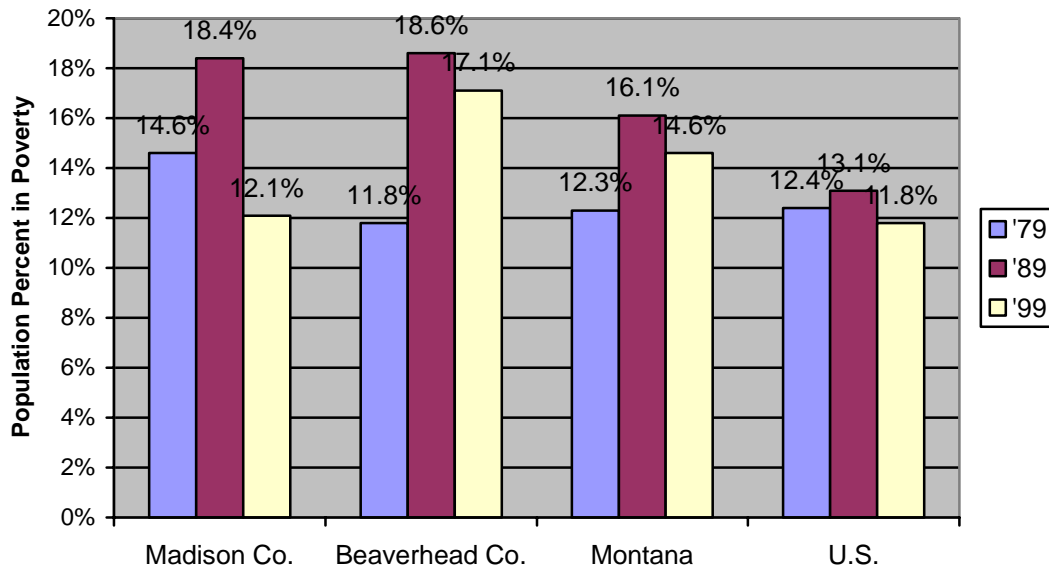
1997, before reaching \$19,154 in 2000. Per capita income in the 28 BLM peer counties was \$15,870 in 1980, considerably higher than income levels in both Madison and Beaverhead Counties at the time. So, per capita income levels have consistently trailed levels in these peer areas over the entire period in Madison County, while per capita income in Beaverhead County, once below the norm for these peers, now exceeds the norm. For comparison purposes, per capita income statewide in Montana in 2000 was \$20,471. Nationwide per capita income was \$26,790, again, both in 1996 dollars. So, while per capita income is increasing in both Madison and Beaverhead Counties over time, levels remain below the norm statewide and well below the national norm, which heavily reflects income levels in major metropolitan areas of the country and not counties like these.

While per capita income is commonly used to measure area economic well-being, it is only an average and it tells us nothing about how income is distributed among the population. Another measure of area economic well-being is the poverty rate. Poverty threshold levels are calculated by the U.S. Census Bureau. These are income levels for households considered to be minimums if household individuals are to have sufficient income for necessities such as food, housing, energy, transportation, etc. Individuals living in households below these income thresholds are considered to be in

poverty. It is important to realize that income thresholds used in making poverty estimates do not take into consideration variations in the cost of living, even though these are substantial across the United States. As a result, these poverty estimates can over-estimate actual poverty levels in low cost areas and under-estimate poverty levels in high cost areas.

Figure 22 shows poverty levels over time for Madison and Beaverhead Counties, as well as for Montana and the U.S. as a whole.

Figure 22: Area Poverty Rates Over Time



The poverty rate for individuals in Madison County rose from 14.6 percent in 1979 to 18.4 percent in 1989, before declining to 12.1 percent in 1999. In Beaverhead County, poverty rose from 11.8 percent to 18.6 percent in 1989 and then declined only marginally to 17.1 percent in 1999. So, while per capita income in Beaverhead County is considerably higher than in Madison County in recent years, the poverty rate in Beaverhead County is much higher. Poverty levels statewide have followed similar patterns, but have been less extreme in fluctuations. This is particularly the case in viewing the poverty rate nationwide which has fluctuated very little, rising from 12.4 percent in

1979 to 13.1 percent in 1989, and back to 11.8 percent in 1999.

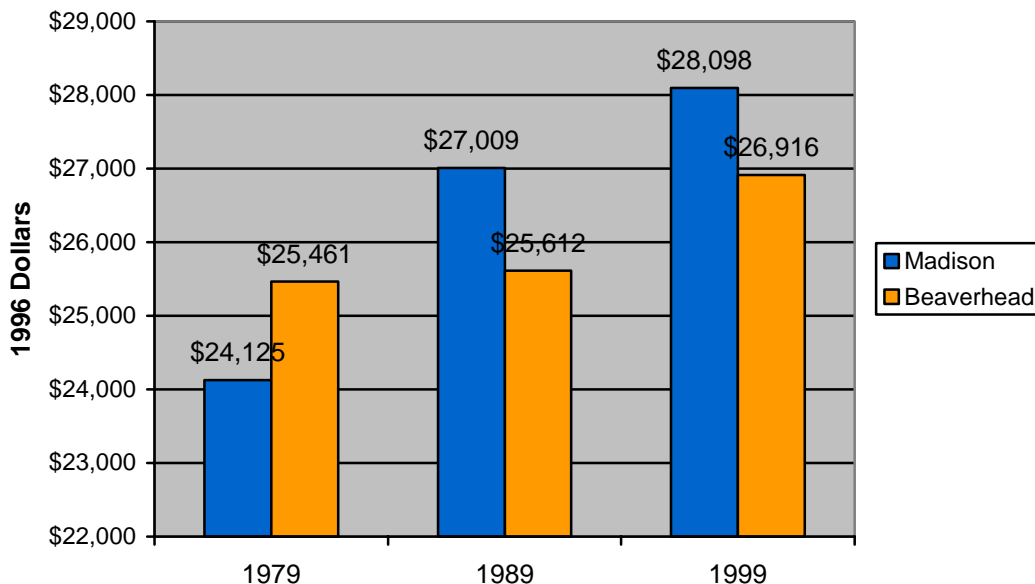
These fluctuations indicate that economic conditions worsened considerably in the two counties in Montana during the 1980s, with marginal improvement in the 1990s in Beaverhead County and rather significant improvement in Madison County. But, this is not the same story that could be told based solely upon per capita income trends and levels.

Another way of gauging area economic well-being is median income. Median income is estimated for households and families in the

United States by the U.S. Census Bureau.
Figure 23 shows median household incomes in

the two counties for several periods.

Fig. 23: Median Household Income in Madison and Beaverhead Counties



Median household income in 1996 inflation-adjusted dollars was \$24,125 in Madison County in 1979, as compared to \$25,461 in Beaverhead County. Median household income rose significantly in Madison County by 1989, reaching \$27,009. The gain in median income in Beaverhead County was much less, increasing only slightly to \$25,612. The most recent estimates place median household income at \$28,098 in Madison County and \$26,916 in

Beaverhead County. Again, a different story of economic well-being emerges with differences in household size and composition in the two counties probably explaining some of the variations.

Taken together, these three measures of area economic well-being describe a fairly complex process of economic adjustment and change in the two counties.

3.5.2 ENVIRONMENTAL JUSTICE

Laws, Regulations, and Policies

- Executive Order 12898 (Environmental Justice)
- BLM Instruction Memorandum 2002-164 (Guidance to Address Environmental Justice (EJ) in Land Use Plans and Related National Environmental Policy Act (NEPA) Documents)

Executive Order 12898, Environmental Justice, requires that Federal agencies “identify and address the...disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” BLM has recently developed an instruction memo containing guidance for evaluating environmental justice issues in land use planning (IM No. 2002-164).

Affected Environment

Environmental justice refers to the fair treatment and meaningful involvement of people of all races, cultures and incomes with respect to the development, implementation and enforcement of environmental laws, regulations, programs and policies. It focuses on the consideration of environmental hazards and human health to avoid disproportionately high and adverse human health or environmental effects on minority and/or low-income populations. Black/African American, Hispanic, Asian and Pacific Islander, American Indian, Eskimo, Aleut, and other non-white persons are defined as minority populations by the Interagency Working Group convened under the auspices of the Executive Order. Low-income populations are defined as persons living below the poverty level based on total income of \$13,359 for a family household of four based on the 2000 census.

None of the defined minority populations represented more than 3% of the population in

Beaverhead or Madison County based on 2000 census numbers. There are no Indian Reservations located in or in close proximity to the planning area. Members of the Shoshone-Bannock Tribes of the Fort Hall Reservation (approximately 110 miles to the south of the planning area) and the Confederated Salish-Kootenai Tribes of the Flathead Reservation (approximately 180 miles to the north of the planning area) are known to use resources on public lands in the planning area for cultural (and to a lesser extent subsistence) purposes. The Fort Hall Reservation (Idaho) had a 2000 American Indian population of 3,648 and the Flathead Reservation had a 2000 American Indian population of 6,999. See the sections on *Cultural* and *Tribal Treaty Rights* for more information.

In 1999, 14.6% of the persons living in the state of Montana had incomes below the poverty level. This compares to 12.1% for Madison County and 17.1% for Beaverhead County. The average per capita income was \$17,151 for the State compared to \$16,944 for Madison County and \$15,621 for Beaverhead County.

3.5.3 HEALTH AND SAFETY

There are three main topics under this section: Abandoned Mine Lands, Debris Flows, and Hazardous Materials. Each of these topics is discussed separately.

3.5.4 HEALTH AND SAFETY--ABANDONED MINE LANDS (AML)

Laws, Regulations, and Policies

BLM Abandoned Mine Lands (AML) are managed, remediated, and administered under the following major laws and guidance:

- Federal Land Policy and Management Act of 1976
- National Environmental Policy Act of

1969 (42 U.S.C. 4321)

- National Oil and Hazardous Substances Pollution Contingency Plan
- Surface Mining Control and Reclamation Act
- Comprehensive Environmental Response Compensation and Liability Act
- Clean Water Action Plan: Restoring and Protecting America's Waters
- BLM Instruction Memorandum 2000-012, "*Policy and Procedures for Prioritizing and Funding Abandon Mine Land Cleanup Projects Under the Clean Water Action Plan*," issued October 27, 1999. Extended on July 18, 2000 under IM-2000-166
- BLM Instruction Memorandum 2000-182, "*Mitigating and Remediating Physical Safety Hazards at Abandoned Mine Land Sites*," issued August 24, 2000.

Reclamation activities at AML sites incorporate federal and state cleanup requirements. The standards, requirements, criteria, or limitations used to conduct reclamation activities are commonly referred to as applicable or relevant and appropriate requirements (ARAR) and are described in detail in **Appendix I**.

The Western Montana Zone (WMZ) staff located in the Butte Field Office conducts the AML program for the Dillon Field Office (DFO), Butte Field Office and Missoula Field Office. Abandoned mine land sites in the planning area are identified and prioritized with other sites located on public lands in western Montana. The priority for reclamation is based on threats to human health and the environment as well as risks to the public from physical safety issues.

Affected Environment

The BLM's Abandoned Mine Lands (AML) program is a relatively new program that addresses the environmental and safety hazards associated with AML sites on public lands. Old mine workings are found throughout Montana on lands administered by the BLM, Forest Service, the State of Montana, and private lands patented under the 1872 Mining Law.

These mineral rich mining districts had little environmental protection from early mining practices. Federal land management agencies had no requirements for performing reclamation at the time most of these mines were abandoned on public lands. Their closures were often inadequate or non-existent. Today, low mineral prices and exhausted lodes have left many abandoned adits shafts, and pits. While most of these mines are small and their waste is inert, some abandoned mines are a threat to human health and the environment as well as a risk to the public from safety hazards associated with the abandoned mines.

Goals

The BLM's Strategic Plan calls for remediating 375 AML sites nation-wide. The BLM's 10-year goal is to eventually evaluate every known AML site on public lands and address all environmental and physical safety hazards present. The Dillon Field Office will continue to assess and characterize all known AML sites on their existing inventory as well as sites that were missed during the initial inventory. The Dillon Field Office does not have the staff or funding available to immediately address the reclamation of all AML sites and will continually prioritize all sites based on risks to human health and safety and the environment.

The BLM's priority for reclamation of environmentally contaminated sites is based on risk assessments that address threats to human

health and the environment. Abandoned mine land sites that impact water quality are usually a greater concern and receive a higher priority for reclamation than sites that do not impact water quality.

The BLM's priority for addressing physical safety threats to the public are AML sites that:

- A death or injury has occurred (and the site has not already been addressed) or
- The mine is situated on or in immediate proximity to developed recreation sites and areas with high visitor use.

• BLM policy requires managers to exercise discretion and consider potential impacts from physical safety and environmental risks at AMLs in future recreation management area designations, land use planning assessments, and all other applicable use authorizations.

Hazards/Risks

There may be some hazards and risks to human health and the environment at abandoned mine sites. Some of the threats to human health and the environment are a result of acid drainage, heavy metal contamination, metal contaminated tailings impoundments, stored chemicals, and leaking containers. An alteration or loss of natural habitat for many native wildlife species can occur because of changes in vegetation or aquatic habitat as a result of soil loss or changes in the chemical composition of soils near AML sites. Abandoned mine lands may also impact surface and ground water flows and water quality. Impacts to water quality are generally the result of contaminated sediments or metal salts that can affect human health, fisheries, wildlife, and vegetation. Air pollution from contaminated dust can occur on tailings impoundments and waste rock piles near abandoned mill sites. There may also be releases or potential releases of hazardous substances from waste materials and acid drainage beyond AML sites.

Physical safety risks associated with abandoned mines are open features including adits, shafts pits, and highwalls; unstable and decayed support structures in mines and buildings; deadly gases and lack of oxygen; explosives and toxic chemicals.

AML Inventory

In 1995, the MTDEQ, Mine Waste Cleanup Bureau completed an inventory and preliminary assessment of what was thought to be the 300 worst AML sites in the State of Montana (Pioneer Technical Services 1995). In 1997, the BLM, in cooperation with the Montana Bureau of Mines and Geology (MBMG), completed an inventory of all AML sites on public lands that were thought to be a threat to human health or the environment. Since completion of the MTDEQ and MBMG inventories, the WMZ Office has identified the hazards at most AML sites and prioritized the sites for reclamation on public lands in western Montana

In Beaverhead and Madison Counties there are 441 mine sites on or near BLM lands that have been identified in the BLM's inventory. Mine sites that are near BLM lands and could be a threat to human health or the environment on adjacent public lands are also identified in the BLM inventory. Until a more thorough reclamation investigation is completed on a specific mine site, any site that may impact public land, will remain on the inventory list. Currently 11 sites in the planning area are listed as having environmental issues. The sites of environmental concern are Rochester/Nez Perce (includes 6 mine sites), Ermont (includes 4 mine sites), and the Short Shift. Four additional mines (the Broadway, Victoria, Buckeye, and Boaz) are located predominantly on private lands and may impact adjacent public lands. Currently, 28 of the listed mines are known to have physical safety concerns. These 28 mines contain 197 dangerous features such as open adits or shafts. While the number of mines with environmental problems has been identified through the BLM's

inventory, mines with safety hazards may not have been found during the initial inventory. The BLM staff and the public frequently report new sites that will require assessment and prioritization based on risks to human health and the environment.

Reclamation Activities

Reclamation funding was first acquired in 1997. Since that time the BLM has been actively reclaiming hard rock AML sites that have significant environmental problems and restoring contaminated watersheds in Western Montana. Many of the sites that have been reclaimed, or still need to be reclaimed, involve mixed land ownerships and the work will require the cooperation of numerous private, federal and state landowners.

Abandoned mine lands that are a threat to human health and the environment are reclaimed under the guidelines of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). These reclamation projects are considered non-time critical removal actions. An engineering evaluation/cost analysis (EE/CA) is generally written for all removal actions and used to analyze mitigation alternatives for a site. The EE/CA discusses the environmental issues and impacts for abandoned mine land reclamation. A risk assessment and the cost of reclamation for each alternative identified in the EE/CA are used in the evaluation of alternatives and selection of a preferred alternative that protects human health and the environment. Additional criteria used to analyze and select a reclamation alternative are: overall protection; compliance with regulation; short and long-term effectiveness; reduction in toxicity, mobility, or volume; implementability; cost agency acceptance; and community acceptance. Reclamation activities at AML sites incorporate federal and state cleanup requirements.

Abandoned mine land sites that are not a threat to human health and the environment, but may be a risk to the public because of physical safety issues, are reclaimed under the guidelines of the National Environmental Policy Act (NEPA).

Two basic types of reclamation activities are commonly used for abandoned mine sites. The first type of reclamation that is commonly used is on-site or off-site removal of waste sources to a mine waste repositories and revegetation of all disturbed areas. A second type of reclamation that is often used is in-place reclamation with subsequent revegetation. Removal activities are designed to eliminate a source of waste from a site and are often conducted to alleviate the most acute or toxic contaminated materials. In-place reclamation activities are designed to minimize, stabilize, or mitigate the contaminated materials to reduce exposure and risks to the public.

On-the-ground actions the BLM may take to deal with physical safety hazards that are a risk to the public include posting warning signs and fencing, permanent closures of adits and shafts, backfilling of high walls, drainage of impoundments, removal of leftover equipment and debris, and revegetation to help offset erosion and improve stability. If a site is not an extreme hazard, a sign or fence may be all that is necessary to reduce the risks from safety hazards to the public.

The reclamation and remediation of AML sites is often complex due to a number of factors. Factors that often impact the reclamation of AML sites include the high cost of reclamation at many sites, legal liability, the complex issues such as chemistry of the waste materials left on site, and the fact that many projects are a mix of public and private land. Many projects are the result of much effort and negotiations on the part of the land management agencies, the regulatory agencies, and the adjacent landowners.

Potentially Responsible Parties

The BLM's policy is to identify potentially responsible parties (PRPs) who are liable for hazardous substance releases affecting BLM lands or resources. After a PRP is identified, the BLM must ensure that the PRP remediates and reclaims the abandoned mine site, or reimburses BLM for costs incurred to clean up the hazardous substance release. If there is no feasible PRP present, the BLM and/or the State will fund the reclamation of AML sites that are a threat to human health or the environment.

Watershed Approach

Several years ago, the Department of the Interior adopted a "watershed approach" for dealing with abandoned mines and water quality issues. Using this approach, the States take the lead in identifying and setting priorities for cleaning up polluted watersheds, and then the Federal land management agencies and the State work with private landowners to coordinate cleanups by leveraging their funds.

The watershed approach provides a mechanism to address the complex, inter-related issues that are critical to water resource protection. It addresses water issues that cross jurisdictions and political boundaries, integrates concerns about water quality and water quantity, and brings together issues from all of the physical sciences. The watershed approach is the most cost effective and efficient method to remediate water quality impacts from abandoned mines. It enables cooperating federal and state agencies to more effectively target appropriate solutions to problems impacting water quality, and aquatic and human resources, by using a risk-based site assessment. It also pools limited funding sources.

Current Activities in the Planning Area

The Rochester Mining District and Ermont Mining District are two abandoned mine sites in

the planning area that are scheduled for remediation and reclamation in the next several years. Both of these sites are relatively extensive and pose a potential risk to surface and ground water due to residual metals and chemicals in the tailings and waste dumps. There are also numerous human safety risks from such things as open shafts and adits, highwalls, and other physical hazards. Both sites will be major projects and involve a substantial amount of funding for site characterization, planning, and reclamation.

In addition to the two watersheds mentioned above, the AML program has several other smaller watersheds and sites that are being evaluated for potential hazards and risks to the public. The AML program will continually evaluate hazards, analyze risks, and re-prioritize sites as necessary, and respond to dangers associated with abandoned mines in the DFO.

Public Awareness

In addition to field projects, the BLM works in cooperation with other Federal and State agencies to conduct a public awareness campaign to warn visitors about the dangers AML sites can pose. The objective is to raise awareness of AML safety risks and concerns among middle school-aged children and teachers. The BLM publishes an educational brochure explaining to the public the high risks of exploring AML sites, with the bottom-line message of "*Stay Out and Stay Alive!*"

3.5.5 HEALTH AND SAFETY—DEBRIS FLOWS

There are no known areas of public land in the planning area subject to debris flows therefore this plan will not address this concern.

3.5.6 HEALTH AND SAFETY--HAZARDOUS MATERIALS

Laws, Regulations, and Policies

Major authorities guiding the BLM's hazardous materials management program include the following:

- National Environmental Policy Act of 1972 (42 U.S.C. 4321)
- Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.)
- Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001)
- Pollution Prevention Act of 1990 (42 U.S.C. 13101)
- Comprehensive Environ. Response, Compensation, and Liability Act (1980, as amended) (42 U.S.C. 9601 et seq.)
- Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.)
- Toxic Substances Control Act of 1976 (15 U.S.C. 2601 et seq.)
- Clean Water Act of 1972, as amended (33 U.S.C. 1251 et seq.)
- Clean Air Act of 1970, as amended (42 U.S.C. 7401 et seq.)
- Uranium Mill Tailings Radiation Control Act of 1978, as amended (42 U.S.C. 2014 et seq.)
- Safe Drinking Water Act of 1974, as amended (42 U.S.C. 300 et seq.)
- Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101 et seq.)
- Transportation Safety Act of 1974; Hazardous Materials Transportation Act amendments of 1976 and 1990 (49 U.S.C. 1801 et seq.)
- Atomic Energy Act of 1954 (42 U.S.C. 2001f)
- Federal Insecticide, Fungicide, and Rodenticide Act of 1975 (7 U.S.C. 136 et seq.)

- Recreation and Public Purposes Act of 1926, as amended in 1988 (43 U.S.C. 869)
- Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.)

The Hazardous Materials program coordinator for the Western Montana Zone (WMZ) office, located in Butte, addresses hazardous materials management (HMM) issues. The Dillon Field Office (DFO) employs one Collateral Duty Hazardous Materials Specialist that spends a limited amount of time dealing with hazardous materials issues. When the public or DFO staff discover a hazardous materials problem, the DFO specialist works with the Butte HMM coordinator and the Dillon staff specialists to resolve the problem.

The hazardous materials staff works closely with law enforcement to try to find the person or persons responsible for hazardous materials dumping or spilling. If the person(s) is discovered, penalties can range from paying for the cost of clean up to criminal charges. The BLM works with the Montana Department of Environmental Quality on hazardous materials issues. The BLM coordinates with the Montana Department of Environmental Quality, Water Quality Bureau, Mine Waste Cleanup Bureau, and other State or Federal agencies as needed.

Hazardous Materials Management staff members seldom sample or cleanup hazardous materials from a site. The BLM usually contracts cleanup to highly qualified contractors that specialize in this type of work. When an incident is reported, BLM staff will take the initial report, view the site from a distance, and coordinate the cleanup with a qualified contractor.

Affected Environment

Hazardous materials on public lands can come in many different forms. Hazardous materials on public lands can be a threat to human health and the environment and costly to remediate.

The HMM program focuses on immediate threats to public health and the environment from spills, dumping, discovery of explosives, etc. The Abandoned Mine Lands (AML) program focuses on the longer term clean up of mine related waste materials that may be considered hazardous to human health and the environment. If hazardous materials are present at abandoned mine sites they are most often considered non-time critical removal actions under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) rather than emergency removal actions that are typical of many hazardous materials problems. The AML program also focuses on physical safety dangers from open shafts, adits, and pits.

Goals

The goals of the Montana/Dakotas BLM hazardous materials management program are to:

- Prevent the occurrence of hazardous materials/waste incidents on public land.
- Prevent illegal dumping of hazardous wastes on public lands.
- Ensure protection of human health and the environment when dealing with hazardous materials/wastes on public lands and BLM facilities.
- Minimize the generation or release of hazardous wastes and pollution on BLM public lands and BLM facilities.
- Remediate or remove existing hazardous sites such as problematic mines, landfills, or dumps.

Potential Sources of Hazardous Materials

Hazardous materials or hazardous material sites can be generated from the activities described in **Table 42**.

Table 42. Activities and Associated Hazardous Materials

Potential Hazard	Examples
Hazardous materials associated with historic and active mine operations	<ul style="list-style-type: none"> • Acid rock drainage • Chemicals associated with processing ore or used in laboratories (ie. cyanide) • Explosives such as dynamite, ammonium nitrate, caps, and boosters • Heavy metals • Asbestos
Military operation	<ul style="list-style-type: none"> • Unexploded ordinances • Aircraft wreckage
Illegal dumping	<ul style="list-style-type: none"> • Unauthorized landfills • Dumping of barrels or other containers with hazardous substances on public land
Illegal activities	<ul style="list-style-type: none"> • Drug Labs • Wire burn sites
Spillage of hazardous materials	<ul style="list-style-type: none"> • Materials spilled from overturned trucks or train cars
Oil and gas activities	<ul style="list-style-type: none"> • Hydrogen sulfide gas • Oil spills
Facilities on public land either federal or private (under a right-of-way)	<ul style="list-style-type: none"> • Leaky underground storage tanks • Asbestos

Hazardous Materials Incidents in the Dillon Planning Area

The largest number of hazardous materials incidents occurring in the planning area are associated with mining activities, both past and present. The planning area has seen extensive mining over the past 150 years and as a result has generated potential for hazardous materials. Due to the absence of reclamation laws and other regulations up until about the mid 1970's, numerous mines have been abandoned with no reclamation. While most of these mines are small and their waste is inert, some abandoned

mines are a threat to human health and the environment as well as a risk to the public from hazardous materials and mine wastes.

Examples of emergency response incidences that have occurred on lands managed by the Dillon Field Office are generally associated with mine sites that contain old dynamite, barrels of chemicals, or chemical spills. Other incidents, not related to mining, include unexploded military ordinances, vehicle accidents and plane crashes. Although most incidences in the planning area to date have been relatively minor, it is impossible to predict the possibility and degree of incidences in the future.

Landfills are another area of concern for the Dillon Field Office. While the BLM no longer permits landfills on public land, a few previously permitted but now closed landfills exist on or near public land. Limited BLM oversight existed during the lifespan of these landfills, and potential does exist for hazardous chemicals (if present) to possibly leach out of the landfills into the ground water. Numerous unpermitted small dumping sites that have occurred on public land over the years also have the potential to leach hazardous chemicals. Many are in remote areas and have been dumping spots for ranches, farms, and area residents. All these sites may contain pesticides, herbicides, petroleum products, paints, and other chemicals. If a problem is identified, BLM will work to remove the contaminants(s) or remediate the problem.

The BLM's policy is to identify potentially responsible parties (PRPs) who are liable for hazardous substance releases affecting BLM lands or resources. After a PRP is identified, the BLM will ensure that the PRP cleans up the hazardous substance, or reimburses BLM for costs incurred to clean up the hazardous substances release.

3.5.7 INDIAN TRUST RESOURCES

There are no lands in the planning area formally held in trust by the federal government. However, the Dillon Field Office maintains a government-to-government relationship with tribal governments in the use and protection of resources on public lands. The exercise of off-reservation treaty rights and management of cultural properties is discussed in the Chapter 3 sections on *Cultural Resources* and *Tribal Treaty Rights*.

3.5.8 SOCIAL CONDITIONS

Laws, Regulations, and Policies

BLM is required to integrate social science information in the preparation of informed, sustainable land use planning decisions. Section 102 of NEPA requires Federal agencies to “insure the integrated use of natural and social sciences...in planning and decision making”. BLM has recently developed an instruction memo containing guidance for social and economic analysis in land use planning (IM No. 2002-167). Also see the section on *Environmental Justice* in this chapter.

Affected Environment

Introduction

The first two sections under Social Conditions discuss some of the social trends and changing attitudes that affect public land management. The third section focuses on Beaverhead and Madison counties in southwestern Montana. The last section discusses some of the individuals and groups who could be affected by the different alternatives. These include: commercial users such as livestock permittees, casual users such as recreationists, communities and advocacy groups.

Social Trends

The movement of people from urban into rural areas in western Montana began in the 1980s and is expected to continue into the 21st century.

This migration reflects a reversal of the rural-to-urban pattern found in most of the U.S. prior to the 1970s. In scenic areas, particularly those suitable for recreation, ranches are being sold for recreation uses or subdivided for homes. Some in-migrants buy smaller lots to ranch or farm but do not depend on an economic return from the property. The population in-migration has increased contacts between longtime rural residents and newcomers whose beliefs and values may challenge the existing way of life. Long-time residents may feel uncomfortable with the resulting change in their way of life, making it a less desirable place for them to live.

Another trend is the increasing popularity of public lands for recreation. A comprehensive report on recreation by Cordell et al. (1999) indicates demand in the Rocky Mountain West for the following activities will increase substantially (in days of demand) by the year 2020: non-consumptive wildlife activities (49%), sightseeing (41%), visiting historic places (40%), fishing (28%), developed camping (25%), primitive camping (15%), off-road driving (20%), hiking (20%), horseback riding (14%), hunting (10%), and backpacking (7%).

Another issue is maintaining access to public lands if access through private lands is required to reach the public lands. In addition, the loss of access to some private lands, for the general public, is putting more pressure on public lands. These changes are linked to the pursuit of a quality recreation experience and occur for a variety of reasons such as the following:

- Lands are purchased for recreation and home sites and closed to others.
- Lands are leased to outfitters for exclusive use and closed to others.
- Lands are closed to avoid problems with safety, fire risk, cut fences, spreading weeds, litter and open gates.

One trend that is occurring in the nation, state, and field office is the aging of the population. In 2000, 14% of the population in Beaverhead County, and 17% of the population in Madison County, were 65 years and over. In the state as a whole, the percentage of population 65 years and over is expected to increase to 25% in 2025.

The percentage of people over 65 is actually increasing more rapidly in states like Montana because young people are more likely to leave for advanced education, military service and employment opportunities not available locally.

Changing Attitudes

Changes in the management of public lands is just one aspect of a broader debate on environmental issues and resource management that is occurring locally, nationally and globally. Social values for lands and natural resources take many forms such as commodity, amenity, environmental quality, ecological, recreation, spiritual, health, and security (Stankey and Clark, 1991). In the past, natural resource management has tended to emphasize commodity values. The emerging emphasis on other values has forced a reevaluation of the commodity emphasis. Stankey and Clark's (1991) report states, "A new focus on the part of the public involves a shift from commodities, and services to environments and habitats. The public is much more concerned about forests as ecosystems than they have been previously and is more concerned with having access to decisions about them."

A nationwide survey conducted in 1997 by Roper Starch Worldwide (1998) offers some interesting information on attitudes toward environmental regulation. Respondents were asked whether they thought environmental laws and regulations had gone too far, had not gone far enough, or had achieved the right balance. Almost three times as many respondents thought laws and regulations had not gone far enough (47%) as those who thought laws and regulations had gone too far (16%). Just over a quarter of the respondents (26%) thought that the laws had struck the right balance. In contrast to the nation as a whole, 29% of the respondents living in rural areas and 27% of the respondents living in the West stated that environmental regulation had gone too far.

When similar questions were asked at the national level in 1998 regarding the current regulation of specific environmental issues, the

following percentages thought regulations had not gone far enough: water pollution (69%), air pollution (62%), wild or natural areas (52%), wetlands (46%), and endangered species (42%). Conversely, the following percentages thought regulation of specific environmental issues had gone too far: endangered species (18%), wetlands (9%), wild or natural areas (10%), air pollution (8%), and water pollution (5%). However, over one quarter (26%) of the respondents living in the West thought endangered species laws had gone too far.

A growing counter movement has become more outspoken in the West, particularly in rural areas. In places where land use had been unrestricted, there is increasing concern regarding the control and management of public lands. People with these concerns feel that change in public land management is being driven by government officials and environmental advocacy groups who do not have a true understanding of the lands or the people living nearby who depend upon these lands for their livelihood and recreation. There is particular concern about the loss of traditional uses of the land such as livestock grazing and cross-country vehicle use. People with these concerns seek to balance what they consider to be “environmental extremism” with economic and human concerns. They may feel that local elected officials, who deal with their problems on a daily basis, are better equipped to make decisions about public lands.

Beaverhead and Madison Counties

(The population figures in the following section are from the U.S. Census Bureau).

In 2001, the population of Beaverhead County was 9,089. This represented an 8% increase since 1990. Beaverhead population peaked in 1996 at 9343. Decreases since then have been due primarily to out-migration. Beaverhead County is the largest county in Montana and is also one of the most sparsely settled with 1.7 persons per square mile. There are two incorporated communities in Beaverhead County (Dillon and Lima). Dillon, the county

seat, had a 2000 population of 3,752, making it home to 40% of the county population. Lima, a ranching community to the south of Dillon, had a 2000 population of 242. Butte, located 65 miles north of Dillon, is the closest major city to most Beaverhead County residents. The population of Beaverhead County is predicted to increase by 17% between 2000 and 2020, which is slower than the prediction for the state as a whole.

The population of Beaverhead county is 96% white, compared to 91% for the state as a whole. Education levels are slightly higher than for the State (89% of Beaverhead County residents over 25 have graduated from high school). Thirteen percent of the residents are 65 and older, compared to a State figure of 14%. The average per capita income of \$16,000 is slightly lower than the State figure of \$17,000 and 12 percent of the population has an income below the poverty level (compared to 15% for the State). The unemployment level of 2% in 1990 was lower than the State as a whole.

Beaverhead County residents feel a strong connection between place, lifestyle and community identity. One important division is the rural/ town division with both groups having their own sense of identity. Rural residents, primarily ranchers, are a distinct group with a common lifestyle and common economic pressures and problems. Townspeople are more diverse in their occupations and lifestyles and may distinguish people more by their occupation and tenure in the community (USDA-FS 2002).

There do not appear to be persistent or intense social conflicts among community groups other than tensions between some newcomers and those who hold different positions about natural resource use or management. Natural resource-use issues have been a source of conflict in Beaverhead County. Examples include such issues as grazing, timber cutting, off-road vehicle use and wilderness areas (USDA-FS 2002). Community groups have formed to address these problems and to work with federal agencies, primarily BLM and the Forest Service, to resolve conflict issues and to provide input regarding planning. These conflicts may

increase in the future if in-migration results in a more diverse population.

A survey completed by a random sample of Beaverhead County residents in 1995 (A&A Research 1995), offers some insight into how Beaverhead County residents view their community and public lands. Residents gave the following responses most frequently when asked what they liked best about living in Beaverhead County: small town and low population, the people, the scenery and landscape, outdoors and open space, mountains, the rural lifestyle, fishing and recreation. Over one third of the respondents indicated growth concerned them a great deal and nearly one-half indicated it somewhat concerned them. Problems, issues, and/or concerns facing the County at the present time (1995) were: growth, road maintenance, funding of services, tax-related issues, planning and zoning, public lands, employment, water-related issues, and substance abuse. When asked about the kinds of things public lands should be used for, the most frequent responses included: grazing and ranching, recreation, logging and timber, multiple use, hunting, maintain public access for all, fishing and mining.

Another survey conducted in 2002 (Beaverhead County Planning Board 2002), also provided information about attitudes toward land use in Beaverhead County. When asked how important each feature was in describing Beaverhead County, the following features were seen as most important: the mountains (90% indicated they were extremely important or important), open space (84%), rural life (82%), agriculture (80%), wildlife (80%), and sense of community (72%). Respondents were also asked to rate items in terms of their important in guiding planning efforts in Beaverhead County. The items that were rated most important were: water rights (89% indicated they were extremely important or important), private property rights (84%), containing noxious weeds (83%), small businesses (82%), the ranching/farming heritage (80%), environmental quality (78%), and development of natural resources (71%).

In 2001, the population of Madison County was 6,939. This represented an increase of 1% from

2000, which followed an increase of 14% between 1990 and 2000. These increases were due to in-migration. Madison County is also one of the most sparsely settled counties in Montana with 1.9 persons per square mile. There are four incorporated communities in Madison County (Ennis, Virginia City, Twin Bridges and Sheridan). The largest of these communities, Ennis, with a 2000 population of 840, is home to 12% of the Madison County residents. Madison County is adjacent to Gallatin County, which was the fastest growing Montana County in the 1990's. Bozeman, in Gallatin County, the closest major city to most Madison County residents, is located about 50 miles northwest of Ennis. The population of Madison County is predicted to increase by 29% between the years 2000 and 2020, which is faster than the prediction for the state as a whole. **Table 43** compares the population and growth in Beaverhead and Madison counties.

The population of Madison county is 97% white, compared to 91% for the state as a whole. Education levels are slightly higher than for the State (90% of Madison County residents over 25 have graduated from high school). Seventeen percent of the residents are 65 and older, compared to a State figure of 14%. The average per capital income of \$17,000 is the same as the statewide figure and 17 percent of the population has an income below the poverty level (compared to 15% for the State). The unemployment level of 3% in 1990 was lower than the State as a whole.

The demography of Madison County suggests it is a "changing place" (USDA-FS 2002). This county experienced one of the fastest growth rates in Montana in the 1990s and is adjacent to the fastest growing county (Gallatin) during that time period. Madison County also has a lower percentage than the state of persons under 18 and a higher percentage of persons 65 years and older, and a high percentage of personal income from dividends, interests and rents. Both of these factors suggest the in-migration of retirees to the county. Eighty-eight percent of the population lives in areas classified by the Bureau of the Census as rural-nonfarm. This reflects the

presence of numerous subdivisions that have aware of the changes that can result from growth and there is an ongoing effort to respond to the social and cultural demands that can occur with growth. Length of residence is an important element is the sense of community in Madison County. The “old family” residents of each geographic area represent the agricultural base and the history of the area. Newcomers may be seasonal or full-time residents. Seasonal newcomers are perceived as less integrated than newcomers who live in the county year round. Responses to newcomers express both real concerns about practical problems and also the values and sense of community of Madison County. These concerns are based on the

developed in the last 15 years. Residents are growth in the Madison and Ruby Valleys where the agricultural/ranching lifestyle is highly valued.

As ranches and farms are sold for subdivision or to absentee owners, ranchers may have fewer options to graze livestock, which may result in increased costs and decreased viability of either continuing their operations or passing them on to their children. The presence of newcomers is influencing how long-term residents perceive their present and anticipate their future, as well as how they define their identity as community members

Table 43
Beaverhead and Madison County Populations

	Beaverhead County	<i>Largest Community in Beaverhead County (Dillon)</i>	Madison County	<i>Largest Community in Madison County (Ennis)</i>
2001 population	9,089	NA	6,939	NA
% Increase/decrease in population from 1990 to 2000	9% increase	6% decrease	14% increase	9% increase
% Increase/decrease in population from 2000 to 2001	1% decrease	NA	1% increase	NA
Projected % increase/decrease in population from 2000 to 2020	17% increase	NA	29% increase	NA
Persons per square mile	1.7	NA	1.9	NA

Affected Groups

Note: This discussion is under construction and will be revised as alternatives are developed.

Discussions of communities of interest and place are included to facilitate the assessment of social impacts. The following individuals and groups will be discussed: commercial users such as livestock permittees, casual users such as recreationists, communities, and advocacy groups. It should be noted that these discussions generalize and simplify the members’ actual values and attitudes. In addition, this format is not meant to imply that these groups are

mutually exclusive and examples of households fitting into all categories are likely to be present. For instance, some ranchers engage in recreation and are particularly concerned about the environment. Recreationists may engage in motorized and nonmotorized types of recreation, and may have high levels of concern about environment. In addition, people’s attitudes and interests may change over time.

Commercial Users

Commercial users include livestock permittees, permitted outfitters and guides, those who lease energy and minerals, the forest products industry, and others. The following discussion

will focus on ranchers/livestock permittees, permitted outfitters and guides, and persons involved in the forest products industry. Approximately 20% of the employees in Beaverhead and Madison Counties are employed in the agriculture, forestry, fishing and hunting, and mining industry, compared to 8% for the state as a whole.

Ranchers/Livestock Permittees

Ranching is an important part of the history, culture and economy of Beaverhead and Madison Counties. In 1997 there were 360 farms in Beaverhead county and 460 farms in Madison County. (“Farms” refer to both farms and ranches.) While the number of farms increased slightly between 1992 and 1997 in both counties, the acreage in farms declined about 15%. During the same time period, the average farm size declined 23% in Madison County and 18% in Beaverhead County. These figures indicate that the subdivision of farms and an increase in “hobby farms” is occurring in both counties. Two hundred and sixty-eight livestock operators in the field office area graze livestock on public lands.

There are many challenges facing ranchers today including changes in federal regulations, economic issues and changing land use. Ranchers and permittees may face increasingly stressful social situations as they try to balance their traditional lifestyles with demands from government agencies and other public land users such as recreationists.

One of the main concerns expressed during scoping was the potential effect of designation of special areas including ACECs and Wild and Scenic Rivers. Other concerns expressed recently by ranchers (USDA-FS 2002) include: noxious weeds, balancing competing uses, continued access to federal grazing, loss of ranchlands, and concerns about OHVs. OHV concerns include weeds being brought into the field office from other areas where weeds are not controlled, and that OHV use associated with allotment management on public lands may be restricted in the future.

Permitted Outfitters and Guides

Some outfitters and guides are ranchers or farmers who use recreation as a means to economic diversification. Others operate full-time or seasonal businesses as outfitters and employ some local residents as guides. There are also independent guides who have their own clients, both local and from outside the region. There are approximately 30 outfitters and guides permitted by the Dillon Field office. The majority of BLM permits are for big game hunting but permits for horseback trips and fishing also exist. The main issue with outfitter and guide permits is that many people perceive them to unfairly deny access to the general public and do not want additional permits to be issued.

Forest Products Industry

In the decades before the 1990s, timber mills were scattered across western Montana producing lumber, plywood, chips and other wood products. Stoltze Mill in Dillon, which closed in 1990, was among the first of many mill closures in western Montana during the 1990s. Today only a few very small family owned and operated mills are in operation. In 1999, Beaverhead County had approximately 80 people and Madison county had approximately 30 people employed in the timber industry (USDA-FS 2002). The connection of lifestyle, occupation and place results in a complex identity for loggers. The loss of a job for a logger is thus more than missing a paycheck—it also means changing a valued way of life. One effects of the mill closures is a feeling that they have been “let down” by the Forest Service because they did not “stand-up” to environmentalists and others who want to manage the forests as preserves. Loggers often describe themselves as people who care about forests and forest health and that their hands-on knowledge is an important but under-valued asset (USDA-FS 2002).

Issues of concern to those involved in the forest products industry include the threat of noxious

weeks, balancing competing land uses, fuel hazard reduction, and salvaging dead trees. In addition, members of the forest products industry and others have expressed concerns that special interests seem to come before local interests (USDA-FS 2002).

Communities

Small towns such as Dillon and Sheridan are unique places with shared values and a relationship with nearby farm and ranchlands. Quality of life issues such as a slower pace of life, low crime rates, high levels of interpersonal trust, volunteerism rather than government as a basis for resolving community problems, opportunities for community involvement, a sense of belonging and a high value placed on the quality of nearby surroundings motivate people to live in these communities (USDA-FS 2000). Schools and athletic activities are an integrating force in these communities where people interact around common interests and concerns—their children. Small towns are often service centers for nearby agricultural communities. Local retailers in these communities may struggle because of competing retail services available in larger nearby communities such as Butte and Bozeman. Many of the smallest communities are losing population and having difficulty maintaining their local businesses and services. Residents of these communities may be very concerned about the economic survival of their communities. On the other hand, residents of communities where in-migration is occurring may be concerned about preserving their current lifestyle in light of newcomers with different values.

There are numerous rural communities in Beaverhead County. Dillon, the county seat and retail and service center, had a 2000 population of 3,752 people. This was a decline of 6% from 1990, although the area around Dillon sustained substantial residential growth in areas that have been subdivided for housing. Dillon is the center for most county services and offers an array of services including a large hospital and a college with over 1000 students. Lima, a small ranching community located about

50 miles south of Dillon, is the other incorporated community in Beaverhead County. Its 2000 population of 242 represented a 6% decline from 1990. There are several other small, unincorporated communities with public lands nearby.

The population and services in Madison County are distributed among several communities. Ennis, which has become a center for recreation activities, is the largest community in Madison County. However, it is home to just 12% of the county population. Ennis had a 2000 population of 840, which represented an increase of 9% from 1990. Although ranching communities located within 9 miles of each other in the Ruby Valley, Sheridan and Twin Bridges have distinct identities. In 2000, Sheridan had a population of 659 while Twin Bridges had a population of 400. These figures represent increases of 1% and 7% respectively, since 1990. Virginia City, which is the county seat of Madison County, is located in a historic mining area and draws tourists from all over the United States. Its 2000 population was 130, which represented an 8% decline from 1990. There are several other small, unincorporated communities with public lands nearby. In addition, there has been substantial subdivision development in Madison County.

Small rural communities can be tied to BLM and public lands in a variety of ways. Local businesses and governments depend upon the employees to maintain a population base for businesses and public services. Use of public lands for livestock grazing, recreation activities, minerals development and other activities can provide employment and help maintain related businesses. In addition, the local residents depend upon the public lands for recreation and open space.

Casual Users

Casual users include recreationists such as hunters, hikers, OHVs; collectors of mushrooms, mineral specimens, etc., those who collect minerals materials from community pits, and others.

Recreationists

Recreation is a component of most lifestyles in the study area. The substantial recreational opportunities for fishing, hunting, hiking, horseback riding, OHV use, skiing and sightseeing are an important element of the overall quality of life for residents. Many people have either moved to these counties or stayed in these counties because of the recreation opportunities. Recreationists are very diverse groups of people and changes in recreation management can affect the people who engage in the various activities very differently. They tend to organize into interest groups; most recreational activities have at least one group that advocates for their activity.

In addition to local recreation use, Madison and Beaverhead Counties attract visitors from all areas of the United States for fishing, hunting and other recreational activities. A 1998 study of Beaverhead County (ITRR, 1999) indicated approximately 500,000 travel groups visiting Montana traveled through Beaverhead County. Over half of these visitors to Beaverhead County were in Montana for vacation, recreation or pleasure. The primary attractions to Montana of these visitors were the mountains, rivers, fishing, uncrowded areas, and Glacier National Park, and the primary activities they participated in included watching wildlife, nature photography, and visiting historic & interpretive sites.

Comments received on recreation during the scoping period included the following concerns: loss of hunting and fishing access, maintaining or increasing access to BLM lands, and OHVs. restricting or maintaining OHV use, the negative effects of OHV/motorized travel on other resources, and enforcing OHV regulations.

Advocacy Groups

Environmental Advocacy Groups

A variety of local, regional and national level environmental advocacy groups and their supporters have shown a great deal of interest in this plan through input received during the

scoping process. Many of their comments focused on wildlife and water issues and special area designations. Concerns regarding wildlife included: the development of habitat management plans for key/umbrella species, the effects of livestock grazing on wildlife, protection of specific species such as sage grouse and the Axolotl salamander, establishment of ecological reserves, and wildlife corridors and habitat fragmentation. Water concerns included: watershed protection and enhancement, overgrazing and damage to nearby lakes and streams, water quality, riparian values and watershed integrity. In addition, some groups nominated many areas for special designation such as ACECs.

These groups indicate the condition of resources on public lands is important to their supporters because they value these resources for wildlife, recreation, education, scenic qualities, wilderness, open space, and a variety of other reasons. Seasonal residents and new year-round residents to Madison and Beaverhead counties, and others living in more urbanized surrounding counties such as Gallatin and Butte-Silver Bow, may support these ideas because they want to protect their lifestyles.

Resource Use Advocacy Groups

There are a variety of advocacy groups that are concerned about limitations being put on the availability of public lands for commercial uses such as livestock grazing, mineral development, timber harvest, oil and gas development, etc. These groups indicate public lands need to be managed to be as productive as possible and that the US needs to lessen its dependence on imported resources. Employment in the mining and oil and gas industries is also seen as adding high paying jobs to the local economies. In addition, some mentioned that others need to recognise that their lifestyle depends on resources gained through livestock production, timber production and mining. These groups also tend to feel that development can occur without destroying the resource if appropriate mitigation measures are implemented.

3.5.9 TRIBAL TREATY RIGHTS

Laws, Regulations, and Policies

BLM coordination or consultation with Native Americans, as it pertains to treaty rights and trust responsibility, is conducted in accordance with the following direction:

- Bureau Manual Handbook H-8160-1 – General Procedural Guidance for Native American Consultation (Washington Office Information Bulletin No. 95-57; November 15, 1994).
- Executive Order No. 13084 – Consultation and Coordination with Indian Tribal Governments, May 14, 1998.
- Government-to-Government Relations with Native American Tribal Governments (Memorandum signed by President Clinton; April 29, 1994).
- Order No. 3175 – Departmental Responsibilities for Indian Trust Resources (Section 2 of Reorganization Plan No. 3 of 1950 – 64 Stat. 1262; November 8, 1993).

Treaties are negotiated contracts made pursuant to the Constitution of the United States and are considered the “supreme law of the land.” They take precedence over any conflicting state laws because of the supremacy clause of the Constitution (Article 6, Clause 2). Treaty rights are not gifts or grants from the United States, but are bargained-for concessions. These rights are grants-of-rights from the tribes, rather than to the tribes. The reciprocal obligations assumed by the Federal government and Indian tribes constitute the chief source of present-day Federal Indian law.

The United States and represented agencies, including the BLM, have a special trust relationship with Indian tribes because of these treaties. As a Federal land managing agency,

the BLM has the responsibility to identify and consider potential impacts of BLM plans, projects, programs, or activities on Indian trust resources (e.g., fish, game, and plant resources—see **Glossary**). When planning any proposed project or action, the BLM must ensure that all anticipated effects on Indian trust resources are addressed in the planning, decision, and operational documents prepared for each project. The BLM also has the responsibility to ensure that meaningful consultation and coordination concerning tribal treaty rights and trust resources are conducted on a government-to-government basis with Federally recognized tribes.

Affected Environment

Native American Indians inhabited southwestern Montana, including the lands now managed by the Dillon Field Office, for thousands of years prior to European contact. They hunted, fished, gathered plant foods, buried their dead, and conducted religious ceremonies on lands within the planning area since time immemorial. **Map 2** depicts the intersect of three major culture areas in the planning area. The lands managed by the Dillon Field Office are within the historical/traditional culture use area of the Shoshone-Bannock Tribes of the Fort Hall Reservation and the Confederated Salish-Kootenai Tribes of the Flathead Reservation. Both tribes continue to express interest in, and concern over, public lands within the planning area. During the 1850's and 1860's, treaties were negotiated with the tribes in the northwestern United States in order to acquire Indian lands for homesteading. The settlement of the northwestern United States by non-Indians led to the collapse of the Tribal Nations as they were previously known, including their economic, social, cultural, religious, and governmental systems.

On July 16, 1855, the confederated tribes of the Flathead, Kootenay (*sic*), and Upper Pend d'Oreilles Indians and the United States signed the *Treaty with the Flatheads, etc., 1855*, referred to as the Hell Gate Treaty (12 Stat. 975). Isaac I. Stevens, who was Governor and Superintendent of Indian Affairs, facilitated this treaty, as well

as others in the Pacific Northwest. In the Hell Gate Treaty, the tribes relinquished ownership of millions of acres of land to the United States. The treaty also guaranteed a permanent homeland for the confederated tribes, which has become known as the Flathead Reservation in northwestern Montana. Article 3 of the treaty also retains the Tribes' "...privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land."

On July 3, 1868, the Eastern Band Shoshone and Bannock Tribes and the United States signed the *Treaty with the Eastern Band Shoshoni and Bannock, 1868*, commonly known as the Fort Bridger Treaty (15 Stat. 673). In the Fort Bridger Treaty, the Tribes relinquished ownership of approximately 20 million acres to the United States, and were guaranteed a permanent homeland, which has become known as the Fort Hall Indian Reservation in southeastern Idaho. Article 4 of the treaty also retains the Tribes' rights to hunt, fish, and gather natural resources, and provides other associative rights necessary to effectuate these rights on the unoccupied lands of the United States.

Appendix J contains copies of the Hell Gate and Fort Bridger treaties.

Since the BLM manages portions of the "unoccupied lands" that are within the traditional use areas of these tribes, the BLM has a trust responsibility to provide the conditions necessary for Indian tribal members to satisfy their treaty rights. Treaty rights in the planning area are extended not only to the Shoshone-Bannock Tribes and Confederated Salish and Kootenai Tribes, but also to other Federally recognized tribes, which may have treaty language that extends their rights to lands in this area.

Members of the Shoshone-Bannock Tribes, the Confederated Salish and Kootenai Tribes, and other Federally recognized tribes exercise their hunting, fishing, and gathering rights on at least state and Federal lands outside the boundaries of their reservations. Currently, Native American tribes are not dependent on commodity resources from lands managed by the Dillon

Field Office for their economic livelihood. However, they do rely on BLM public lands resources for subsistence and cultural purposes. Tribal treaty rights pursued on public lands within the Dillon Field Office include fishing for resident game fish species, hunting both large and small game, and gathering various natural resources for both subsistence and medicinal purposes. Currently, there is little specific information available on the exact species sought or locations used by Native Americans exercising their treaty rights within the boundaries of the planning area.